

V A D E M E C
O R, A
C O M P A N I O N
F O R A
C H Y R U R G I O N
F I T T E D



For Sea, or Land; Peace, or War.

Shewing the use of his Instruments, and
Virtues of Medicines Simple and Com-
pound most in use, and how to make them up
after the best Method.

With the manner of making Reports to a
Magistrate, or Coroner's Inquest. A Treatise of
Bleeding at the Nose. With directions for Bleed-
ing, Purging, Vomiting, &c.

By *Thomas Brugis* Doctor in Physic.

The Sixth Edition, Amended and Augmented.

With an Institution of **PHYSIC**,
and seven New Treatises viz. of Tumors,
Wounds, Ulcers, Fractures, Dislocations, Lues
Venerea, Anatomy.

By **ELLIS PRAT M.D.**

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To his ever Honoured Friend,

SIR THOMAS BEAUMONT

O F

GRACE DIEU in the Coun-
ty of Leiceſter Kt. and Bar.

SIR,

THE Divine Hippocrates
ſays, Ο Καρὸς ὁ Θεὸς, there-
fore as the Hebrews us'd to ſet
marks, ſometimes on their Arms,
ſometimes at their Gates, to publiſh
to the World the Benefits God con-
fer'd upon them: So have I made
A 2 uſe

The Epistle Dedicatory.

use of this opportunity, as a mark of my grateful Acknowledgment of the many great Favors you have been pleas'd to accumulate upon me. 'Tis too mean an one, Sir, I confess, for one of your high Birth, and general Learning.

Your Birth being no less than from Regal Progeny ; so for that I have to boast of with the Prince of Latine Lyrics, for his Mecœnas came from Etrurian, and you, Sir, mine, from Gallican Kings, and so can equally say,

*Bellomons atavis edite Regibus ;
O & Præsidium, & dulce decus meum.*

And for your Learning, 'tis so eminently noted by all that know you, that it needs no Encomium from me. But when, Sir, you shall
see

The Epistle Dedicatory.

see, that it is intended for Beginners, I am metaphysically assur'd of your favorable acceptance. For the Book it self, Sir, 'tis an abstract of the Doctrine of Hippocrates and Galen, and other the best Writers to our time; the name of the first being enough, I hope, in its Commendation and Vindication from the malevolent Calumnies of ignorant, impudent Pseudochymical Empyrics, to whom that of Ga'en may most fitly be apply'd, Ἐκεῖναι μὴ ἔτε ζητοῦσιν ἔτε ἴσασιν, ἀλλὰ ἐκατὰ παροιμίαν ἐνὶ καλόποδι παύτας ὑποδέχουσιν: Or that of the most Scientific Historian Thucidides, Ἡ ἀμαθία μὴ δρασεῖς ὀκνεῖς ὃ τὸ λελογισμένον ἀπεργάζεται.

Now for my self, Sir, I shall Apologize in the words of the great

The Epistle Dedicatory.

Seneca to his Lucilius, *De alienis liberalis fuis; quare autem aliena dixi? quæcunque bene dicta sunt ab ullo mea sunt: and ever remain,*

Honoured SIR,

Your most obliged Servant,

E. P R A T.

To the Young ARTIST,

By way of Institution.

THat thou may'st be the better enabled to comprehend what's in the Body of this Book, which is wholly Practical, I desire thee first to read this small Theoretical System.

First then know, thou intendest to employ thy self in part of an Art, whose *Author*, *Necessity*, and *Subjeſt*, enough commend it ; *i. Medicine*, ſo call'd, *à medendo* ; its Author, is that of every good Gift, G O D ; whom *Mofes* and *Syrach* tell us, made Plants and Medicines out of the earth, and the Phyſician to be honor'd. Experience brought it firſt in uſe, to which daily Neceſſity gave occaſion ; probably practis'd among the *Egyptians*, ſays the great *Heurnius*, for we find its chief *axioms* to come from them ; as to be ſeen in *Hipp. 1. Aph. 22.* and *Ariſt. 3. Polit. 11.* and *Herodotus* in *Euterpe* tells us, particular diſeaſes among them, had their particular Phyſicians ; ſo for the head, teeth, eyes, &c. and their Lands moſt fruitful in Medicines. Now

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Expe-

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Experience first invented the dyetetic part, *Hipp. de vet. Med.* for men changing dyet, when sick so recover'd; which *Herodotus* says the *Egyptians* did, who used every month to purge three dayes, thinking all diseases proceeded from dyet; for their air never chang'd. The *Grecians* make *Apollo* the Inventer, and *Æsculapius* the Amplifier; who was esteem'd a god, because he call'd to life *Hippoclytus* and *Androgæus* Son of *Minois*, but I suppose 'twas, because he prolong'd their Lives by his Art. *Pliny* will have it *chyron* the centaur, whence *centaury* so call'd. *Æsculapius's* two Sons, *Podalyrius* and *Machaon*, in the *Trojan War*, practis'd rather *Chyrurgery*, than *Dyet* or *Pharmacy*. Whatever Mortal was the Author, we are most infinitely oblig'd to the Divine *Hippocrates*, the first Writer, for our knowledge therein. Next *Galen*, who expounded him, distinguisht things confus'd, supply'd what was wanting, and may deservedly be held to have completed the Art; for what hath since been writ to purpose, is drawn from their Ocean. 'Tis defin'd by *Hipp. l. de flatib. additio* and *subtractio*; because diseases come from repletion or inanition, and so are cur'd, by subtracting what's redundant, and adding what's deficient; its subject for Theory and Practice, the *macro*, and *microcosm*. 'Tis parted into three Sects.

I. Em-

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1. *Empirics*, who slight Reason, and only build upon use, they inquire only into the symptoms; they try medicines, which they call *antopsia*, i. e. self-seeing, or learn them tryed from others, which is call'd *history*; or whatsoever they find in Books, then they use them by passing from like to like; either from disease to disease, as in *erysipelas*, and *herpes*; or from remedy to remedy, as in *mespilo* and *citaneo*, or from part to part, as *brachium* and *tibia*, &c. Remedies, they say, are *fortuita imitatoria*, or *consulto adhibita*; they allow only of evident Reason; *Acron Agrigentinus* was the first of this Sect, who had many followers; and of which there are too many at this day, such as the *Pseudochymists*.

2. *Methodics*, these mind neither *part affected*, *cause*, *age*, *time*, *region*, *faculties*, *habit*, nor *custom* of the sick, only the disease; wherein they consider'd *communitates* i. common notions, whereof two are simple, one mixt; they'll have every disease to be either bound or loose, or compound of both; the bound they loosen'd, and the loose they bound; in mixt they helpt what urg'd most; and so they said the whole Art might be learnt in six months; communities are either passive, as what's *bound*, *loos'd*, or *active*, as to *bind*, *loose*; or temporal, as the *beginning*, *augment*, *state*, *declination*. To heal, is to remove

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what's *strange*, which is either *extern* or *intern*; that's so *simple*; this so either in *place*, *magnitude*, or *defect*. *Themison* began this *Sect*, whom *Juvenal*, speaking of the incommodities of old Age, mentions, when he says they are as many attending it.

Quot Themison egros autumnno occiderit uno.

Theffalus Trallianus finisht it, who, in his Monument in the *Appian* way at *Rome*, would be call'd *Iatronices*, i. *medicorum victor*.

3. *Dogmatics*, or *Rationals*; these inquir'd into all abovenam'd; *Hippocrates* was the Author of this, and *Galen* completed it. And this is to be chiefly follow'd, being compos'd of *reason* and *experience*: of this are 2 parts, *Hygiene*, which shews how to preserve health; and *Therapeutic*, which cures diseases. But these being not to be accomplish'd without knowledge of bodies and diseases, three other were added, *Physiologia*, which unfolds the natural constitutions of bodies. *Pathologia*, which looks to the nature, cause, and symptoms of diseases. *Semeiotica*, which discourses of past, present, and future signs. *Hygiene* considers six *non-natural* things, with their various use in sick and sound, old and young, &c. *Therapeia* teaches how to cure diseases, by *Diet*, *Pharmacy*, or *Chyrurgery*.

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gery. Now this Book being chiefly compos'd for the young Students in the last, I shall lay down a few Rules for the easier attaining to the knowledge thereof.

Know then, with our famous Dr. Read, I define *Chyrurgery a branch of the therapeutical part of Medicine, whereby divers diseases of mans body are cured by manual operation*. The first words contain the *genus*, the last, *i. e.* by *manual operation* the *differentia*, for of these two all definitions consist, according to Philosophers. It differs from *Dyet* and *Pharmacy*, in that they act not upon their subject by manual operation. Its etymology's, obvious from *chier*, *manus*, and *ergon*, *opus*; and though formerly mean Mechanics have been call'd Chyrurgions, yet now 'tis by excellence attributed only to those who work upon that divine subject, the body of man.

Now the means to attain this Art, is by acquiring a competent knowledge in the fore-named parts of Medicine. The first whereof is *Physiology*, no one can cure aright, that does not well know the constitution of the body he has in hand; which is properly *natural Philosophy* itself, translated to a medicinal use: for *ubi desinit physicus, ibi incipit medicus*; but *Natural Philosopher* ends not but in *Physiology* and *Pathology*; so the study of Medicine is to begin with the *Semeiotica*,

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or *Therapeia*. Now in *Physiology* are to be consider'd, *Elements*, *Temperaments*, *Parts*, *Humors*, *Spirits*, *Faculties*, *Actions*, of which in order.

PHYSIOLOGIA,

An *Element* is a simple body, out of which a mixt is compos'd, and into which 'tis lastly resolv'd; these are four, *Fire*, *Air*, *Water*, *Earth*, which *Hippocrates* l. *natur. hum.* call'd hot, cold, moist, dry, from their qualities.

From these temper'd among themselves, rises *Ovid's* *concordia discors*, of one body, which, according to the quality of mixtion, obtains such and such a nature; whence 9 differences of temperaments, 8 intemperate, 4 simple, hot, cold, &c. 4 compound, hot and moist, hot and dry, cold and moist, cold and dry, 1. temperate either, simply so, or according to weight, when the qualities are equal, which is rather *utopian* than real; or at least but momentary: or according to justice; wherein is a moderation of Elements, agreeable to the nature of Man, Beast, Plant, &c. of this are certain limits, *quos ultra citraque nequit consistere sanum*. 'Tis divided into *sanguin*, *bilious*, *phlegmatic*, *melancholic*, and so analogous to the Elements and Humors, call'd second Elements; sex and age follow temper;

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temper; males commonly hotter than females; childhood to 14 years, hot and moist; adolescence to 25, the best temper; manhood, decays to old age, growing cold and dry.

Now that all things live by an innate heat, and that it might penetrate all the parts of the body, 'tis resident in the spirits, whose definition (whatever *Argentarius* says) is this; A spirit's an airy subtile clear body like a vapor; the seat, and bond of the faculties, and the first instrument of the functions; whereof the *basis* is *humidum radicale*. Some make three spirits: 1. Vital, sent from the heart by the arteries to all parts. 2. Natural, of which the vital is begot, by inspiration of air: of this *Galen* doubted, as included in the vital, but the spirits of aliments ought not to be denied to the blood, whence hotter blood from wine than letice. 3. Animal, made of the vital elaborated in *plexu reteformi*, sent out by the nerves for sense and motion, and irradiate the parts; some hold only the first and last, some the last.

A part is perfectly defin'd, by the great *Fernelius*, a body adhering to the whole, endued with common life, ordained for its function and use. So hairs, nails, fat, marrow, &c. nor *Hippocrates*'s humors and spirits, strictly deserve not the name of parts. Of Parts, see Anatomy.

By

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By *Humor* understand not, with Philosophers, a quality opposite to driness, but a body, yet not any, for chyle, seed, milk, sweat, urine, &c. are not properly humors, but only the alimentary with their excrements: 'tis rashness to deny them, seeing they affect us in quantity, quality, &c. they're begot of the mixtion of aliments, four in general. 1. Natural, going under the name of blood, whose hot, cold, thick, thin parts, are call'd choler, phlegm, melancholy; *serum's* their vehicle, expell'd by urine, sweat, tears, &c. Pure blood makes men blithe, florid, prudent, &c. but if it redound, foolish, &c. 2. Excrementitious are to be voided by their proper places; Phlegm is, as it were, nutriment half cocted, so is to be alter'd, but that in the intestines unconcocted, is absterg'd by bile, and voided by siege, that that distills from the brain is *mucus*: this makes men slow, sleepy, &c. Bile hath its seat in the gall, bladder, to purge the blood from jaundice; and irritate the belly, and absterge phlegm; it makes men angry, quick-wit, &c. Melancholy, *faex sanguinis*, black, seated in the spleen; if not voided by hemorrhoids, &c. the whole body waxes black; it makes deceitful, sad, envious, timorous, &c. but mixt with blood or bile, constant and ingenious; it helps concoction, *Gal. 5. de usu part.* being
acid

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acid and contracting, and by its acerbity causes hunger; *Soranus* says these domineer in the body at certain times, blood in the morn, bile at noon, melancholy in the evening, phlegm by night. Blood natural is simply so call'd, but ill-affected, bilious, pituitous, melancholic, made so by putrefaction, adustion, refrigeration, or obstruction. And when it exceeds in quality or quantity, 'tis 3. Preternatural, of which phlegm's fourfold; sweet, often spit out; acide, less cold than glassy, more than sweet; glassy, very cold, cleaving to the intestines, causes torments; at length becomes plastrous, whence *tophi in articulis*, salt, from putrefaction, or mixtion of salt serum. Bile four-fold, vitelline burnt in the veins; *Porraceous*, begot in the stomach; *Æruginous*; woody, sometimes begot in *ventriculo*, sometimes in *venis*; all call'd from their likeness. There is but one species of *atra bilis*, very hurtful, sharp, fomenting the earth like vinegar, caus'd of adustion or putrefaction of other excrements: vitelline bile turns to porraceous, eruginous, glasteous, at last to black; 'tis made also of the blood's thicker part, as bile of its thinner; it cannot be made of phlegm, unless salt.

The *Soul's* the form, and cause of all operations, by which 'tis known, else its essence would be hid. *Galen* calls that *temperies*, by which

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which 'tis conserv'd, *intemperie fugit è corpore*; but *temperies* and innate heat, are only the *causæ sine qua*, it stays not to operate. Faculty is the cause from which action proceeds, or the natural power of the Soul ordain'd to work by itself, from which action in active motion proceeds; operation is that which is perform'd by action; as flesh, blood, &c. action indeed is operation, as sanguification, &c. not *è contra*, as flesh is the operation, not action of nature: faculty and action is three-fold, 1. Natural, even in Plants and Brutes, call'd the concupiscible, and altering, diffus'd in every part from the liver, has 4 subservient, attracting, reteining, concocting, expelling; some common parts have faculties, as stomach, &c. for themselves, and others, for which they use *fibres*, but coction is perform'd by heat and faculty. 2. Vital, from the heart sending life; *Plato* call'd it irascible. 3. Animal from the brain, by nerves, sends sense and motion.

Now *actions* are to be consider'd in health and sickness; when unhurt, and hurt, they shew them; and for prediction. Action is never hurt in natural organs, where the faculties insite, but a part is affected; but animal organs have the principle of sense and motion elsewhere, so action may perish the part unhurt. Natural facultie's action is

triple,

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triple, 1. Nutrition, the turning of aliment into the substance of the living weight, which is done by a triple coction, 1. in the stomach chylifying, which is help't by the liver, other parts heat; 'tis the seat of hunger, because of an exquisite sense, for hunger is a pain in desiring meat; 'tis nourish'd by blood, not chyle, the feces mixt with chyle are thrust out, and tinctur'd with bile; urine is an excrement of this coction, for every one hath two, thin and thick; the chyle cocted is detrued by *pilorus* to the intestines, the meseraic veins attract what's serviceable, and then 'tis carried to the liver, and there turn'd to blood; and this is the 2d coction and senses to all parts of the body, as in Anatomy, which assimilate it, which is perfect nourishment: thus in the veins and arteries is a nameless humor, not much unlike blood, bedewing the parts of substance, 'tis call'd *ros*, cleaving *cambium*, perfectly assimilated *gluten*, and these are the *Arabians* secondary humors. Auction, which is an amplifying a body in length, bredth, and depth, till it acquire its full magnitude; but calor and humor decrease, till the weight dyes.

Generation is a work of the natural faculty, for propagation of *species*, or a motion to a new substance; when Animals are not perpetual, what they cannot obtain in individuals, they obtain in *species*.

Now

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Now generation of perfect Creatures, is of the males seed, and the females menstruous blood, and consists of alteration, giving the substance, and formation, conjunction of parts, form, site, &c.

Seeds are join'd in the womb, whence follows conception; then the plastic faculty makes the 3 membranes involving the *fetus*, and forms all the parts together, for they want one anothers help; neither are they inform'd first with the vegetative soul, then the sensitive, and lastly the rational; for they are organs of all: and now having a house prepar'd, it begins to be nourish'd, about the 3d month it moves, before it has neither soul, life, nor motion; 'tis not nourish'd by the mouth, say some, but draws the maternal blood by the umbilical vessels, which are a vein, two arteries, and *ourachos*, by which 'tis thought to void urine; others say 'tis nourish'd at the mouth by chile, till it grows bigger, and wants room and air, then by kicking breaks the membranes, &c. before the 7th month its birth is not vital, in the 7th it may, if strong; else 'tis defer'd till the 9th, 10th, or 11th; not vital in the 8th month out of *Egypt*.

The vital faculty's a middle between natural and animal; 'tis in the heart, hither is refer'd pulse, and respiration, of which in
Anatomy. The

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The animal virtue is the principle of motion, sense, understanding, because join'd to the phantasie, else 'tis not an organical faculty; 'tis triple, 1. Sensative, the outer senses are, 1. seeing, whose object is any thing visible, color or light; its organ is the eye, chrysal-line humor, other parts are only subservient. 2. hearing's object is sound, its inner organ the membrane full of air, outward water, or air. 3. smelling is objects odor, the middle air and water, organ's the nose. 4. tast's object is *sapor*, organ *lingua*; 5. touching's objects is the first and second qualities, organ, membranes, and nerves. The inner sense or principal faculty is triple, phantasie, reasoning, memory, the common sense is as it were the others centre, and their Judge, it distinguishing between color, sound and other objects; phantasie apprehends, and distinguishes all objects and forms offer'd by the outer senses; by reasoning we meditate of conceived *species*: memory conserves things known. To the outward senses is refer'd sleeping and waking; sleep is cause of a benign vapor, obstructing part of the spirit's course; not all, for they breathe, and sometime walk; 'tis caused also by retraction of the spirits towards the heart, by the senses organs; whence singing, music, labor, talk, earnest reading, cause sleep; narcotics, by staying the spirits, pain, labor,

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labor, waking, by absorbing them, circular motions distract, coctions, frictions, *lotiones pedum* revoke, binders, obstructers, darkness, night, silence, bring a numness upon them. The loco-motive faculty is in the muscles, influenc'd from this spirit : of dreams, &c. in Philosophy. And this is the œconomy of our Body, according to the doctrine of the Ancients, I know the Moderns, as *Rolfinccius*, *Cartesius*, *Regius*, *Silvius*, and others decree otherwise, as to the doctrine of *chilification*, *sanguification*, *nutrition*, *generation*, *motion*, *respiration*, *sensation*, &c. but whether either be receiv'd, yet the old method of healing is not chang'd by the mortification of *plethora*, *cacochymia*, or any cause ; but the same curatory, preservatory, and vital indications remain still, as *Rolfinccius* hath strongly insinuated ; and his defender the most excellent *Moebius*, elegantly prosecutes, and largely : Therefore, sayes the Learned *Jo. Daniel Horstius*, we owe God thanks, that the method of Curing grows famous daily, and is still the same, notwithstanding the disagreeing of so many new physcal and anatomical Opinions. Do not, I pray, the *Aristotelian's*, and *Democritics*, sharply contend among themselves about Elements and Atoms ? and yet both heal the same way, as plainly appears from what *Leichnerus* hath elegantly deliver'd, *Paragr. 55.* and after ex 4. *de Atomis.*

H.Y.

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HYGIENE.

Next are things not natural to be consider'd, so call'd, because they are not in the body *secundam naturam*, as the faculty, nor *præter naturam*, as diseases, but in a mid way between both, for dyet consisting in their use, being well used they help, if not they hurt, by altering the body; for they defend both, and prevent diseases, therefore see their use in both; they are 6. the first is Air, consider'd in substance, quality, occasion and use; air pure and clear, the grounds east and north, high places best, hot augments bile, causes fevers, &c. cold distillations hinders transpiration; promotes infirm coction, but hurts infirm bodies. Dry illustrates the spirits, hinders putrefaction; moist, hastens putrefaction; in diseases it must be of a contrary quality, by art or nature; light is for mild diseases, dark for implacid, &c. in long diseases 'tis good to change Countries, *Gal. 5. Meth.* sent those troubled with phthysics to *Tabias*, a dry Air, nigh *Naples*, where was plenty of dry herbs, so that milk was very proper in the cure. The Moon changes the Air with its quarters, the first like Spring, temperate; the 2d Summer, hot and dry; the 3d Autumn, uncertain; the 4th Winter, cold and moist.

Motion

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Motion

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Motion comprehends all exercise, whence three commodities, hardness of instruments from mutual attrition ; increase of insite heat, and vehement motion of spirits, strength of actions and health, follow hardness of organs; attraction, coction, distribution, nourishment, expulsion, follows increase of heat ; for passages are looser, humors melted, solid parts softened ; and a strong spirit purges passages, expels excrements; so *Hippocrates* sayes right, *To study health, is to be quick to labor.* Exercise till the body be florid , sweat begin to flow, and motion nimbler ; hot, dry bodies, less than cold, moist ; let labor precede meat, *Hip. 6. Epid. 4. Aph. ult.* excrements of belly and bladder evacuated ; who cannot exercise, may use frictions; there are divers kinds of exercise, Tennis, &c. for the whole body; riding the intestines, &c. walking and running the thighs, &c. reading , singing , the lungs; lastly, quiet may help and hurt, as well as exercise.

Meat and *drink*, call'd *aliment*, repair our body ; they must not be too unlike our body, as Stones, &c. but animated, as Plants , or Animals, or coming of them, as milk, wine, &c. 'tis either simple, as flesh ; or medicinal, as vegetables ; which respect the cause of the disease ; in flesh this quality is not minded, but only the substance. Now in *aliment* mind

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the substance, or goodness, or quality, quantity, custom, delight, order, time, region, age, &c.

As for substance, it must breed good juice so Birds, before Beasts, younger, before older; for quality, hot heat us, &c. health must be preserv'd by its like, a disease mended by its contrary: so must resist the disease by their quality, but by accident; for a disease doth not indicate dyet, but a remedy; therefore to young and feverish, a moist dyet, 1 *Aph.* 16. let it be like the tempers, age, region, season, unless the temper be to be reduc'd to its contrary; for in diseases it ought to be contrary; as moist and cold, in fevers, chiefly if the temper be the same, as a fever in a bilious temper; so full of crude humors must use attenuaters.

For quantity, it must not be more than nature requires, lest it cause a disease; 2 *Aph.* 17. and to study health, is not to be cloy'd with meats, 6. *Epid. Aph.* 20. Repletion's the parent of *plethora*, and *cacochymia*; a mean conserves health. In acute diseases, the less meat; 1. *Ptisan*, or thin broth, 1. *Aph.* 7. in chronic not so sparing; when 'tis best to err with the most, *Aph.* 5. yet *Hippocrates* doth not absolutely persuade a full dyet; for 2. *Aph.* 30. & *Gal. Comment.* 52. write what exceeds hurt, what's wanting easier amend-
ed,

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ed, &c. in great pain and acute disease not good to give meat; strength is alwayes to be ey'd, lest it fail, or be oppress'd, 1 Aph. 9. for this prescribes the form, quantity and manner of dyet; if strong, nourish well; if not, sparingly. In the sick tis to be compar'd with the disease and cause; for a great disease bears not meat, lest nature be call'd from its coction. In chronic a mean does well; in acute towards the state specially: the sharper the thinner dyet, when the symptoms are more grievous. Future strength is also to be ey'd yet 'tis safer to decline to excess, than defect. If the strength be exhausted with watching great evacuation, a fuller dyet; but if by oppression of humors, with vehemency of symptoms, lessen it: for strength never urges unless wasted; custom is never to be neglected, in sick give a grain of allowance to old custom; for sudden changes are dangerous. 6. Epid. 3. 21. For Order

Ut vites pœnam de potibus incipe cœnam.

Which is to be understood of broths, &c. not strong wine, &c. which hurting the nervous parts, breed gouts, and fluctuosities, therefore drink at last to mix all; so

Incipe cum succo, succo finire memento.

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for time, take not meats unseasonably, nor before former coction. In diseases give not in the Paroxysm, 1. *Aph.* 11. 18. unless the Fever be caus'd of want, labor, &c. sharp juices. Eat sparingly in a hot Countrey; so youth eats more than old, *Aph.* 13. 14. to youth a moist dyet, 1. *Aph.* 16. but if hot and dry, cold dyet; boil'd, rather than roast; small drink. In strong bodies, supper larger than dinner, for sleep concocts, watching digests; let him that's subject to catarrhs, sup sparingly. If there be want or corruption, eat often and much; if Paroxysm, or Symptom hinder not. If weak, and full of humors, eat seldom and little; with want of humors, and malignity, a little, and often.

Drink appeases thirst, and is the vehicle of meat, if only water or small beer, for strong bodies it may be liberal, else sparing and often; who eat much, drink much, & *contra*. For water, fountains or river are best; wine and strong liquors, hurt bilious, hot natures; breed gouts, and scurvy diseases; for bread wheat leaven'd nourishes most, rye and barley less, but deterge: fresh fish beget phlegm; are easily corrupted; salt of bad vice; green fruits beget thin, ferous juices, temper humors, moisten.

Sleep concocts meat and humors, corrects the diseases of the mind, moistens, 6. *Epid.*

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sect. 5. aph. 10. labor's for the joints and flesh meat and sleep for the *viscera*, longer than 7, or 8 hours gathers excrements; best by night, hurts those whose *viscera* are inflam'd, chiefly *in principio*, blood flowing to the inward parts, *6. Epid. sect. 5. aph. 29.* and in the beginning of Fever fits, for when there's rigor, horror, or coldness of parts, heat and humors are drawn inward, when 'tis better by watching to be drawn outward, else crudities are multiply'd, and hard to dissolve; for blood is carried outward by watching; *6. Epid. sect. 4. aph. 12.* sleep on one side watching must be moderate too, for too much breeds crudities.

Passions are turbulent and stir'd motions of the mind, therefore much of use in the body the *Stoicks* would have a wise man without passion, but the *Peripatetics* allow a mean, as anger in phlegmy bodies, fear contracts the spirits, anger stirs heat: in bashfulness the blood first moves inwards, but quickly returns again outward; if not, 'tis fear: some have dyed suddenly with fear, no body of anger for by it heat's not cool'd, nor strength dissolv'd, or spirit recall'd, as in fear; pusillanimous have dyed of joy, the faculties being dissolv'd, and so of shame; therefore the passions are not to be neglected, but corrected for they shew diseases present or future.

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fear and sadness hold long, 'tis melancholie, *Aph.* 25. l. 6. & 6. *Epid.* sect. 828. and we may so know whether they come without cause, or not. *Excreta & retenta* help, if what's to be evacuated be so & *contra*; these are excrements of the belly, urine, insensible transpiration, courses, seed, hemorrhoids, &c. for a farewell to this, remember that saying of *Hippocrates*, *labor, cibus, somnus, Venus, omnia mediocria*,

P A T H O L O G I A.

A disease is a preternatural affection, hurting first the actions, of which are three kinds, *similar, organic, and commune*; whose integrity is requir'd in health, but one failing in sickness.

A distemper is a similar disease, and is either equal in all parts, and without pain, as in a hectic fever, or unequal, as *anasaraca*, tumors, &c. and is with or without matter, simple, or compound, as in *Physiology*.

Organic in ill conformation is fourfold; composition, number, magnitude, site; in composition are three *species*, vitiated figure, as a strait part made crooked, & *contra*, vitiated *superficies*, as a smooth one made rough, & *contra*, cavity too much dilated by *anastomosis*, &c. or bound by obstruction, compression,

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sion, contraction, *subsidentia*. A disease in number, is by defect or excess, as 6th finger worms, &c. In magnitude apart, bigger or lesser. In site, when they possess not their natural place, as in *hernia*'s, &c.

A disease *commune* to similar and organic part, is call'd *solution of unity*; of which in wounds, &c. diseases of matter are organic, as softness, hardness of parts, &c. diseases of form are similar; the temper and figure of a part being whole, action cannot be hurt by the only fault of the form; agents by their whole substance beget ordinary diseases, as a malignant ulcer is a solution of continuity, but malignity is the quality of the cause.

A *cause* is a preternatural affection producing a disease: in generation 'tis whatsoever conduces any thing to the begetting a disease; and so it contains *causa sine qua non*; it hurts not the function first but by a disease; 'tis fourfold, material, formal, final, and efficient, of which last only here, 'tis that by which a thing is caus'd, so the subject be capable; whence in the same place all are not infected; 'tis *per se*, apt to prduce the effect, as heat of the Sun, causes a Fever, by hap cold obstructing the pores, 'tis intern and extern; this is without as non-naturals, &c. call'd *procatartici*; that's within the body, as *plethora*, &c. call'd *antecedent. procatartici*. causes not a disease,

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ease, unless in a body dispos'd, 'tis otherwise call'd *manifest*, for 'tis alwayes evident, *non contra*, as a Sword is the evident outer cause of a wound, but not the *procatarcti*. because it acquires not a disposition. The antecedent is the very morbus disposition found in humoral diseases, and may oft be prevented by remedies, that it hurt not; when it actually hurts, 'tis call'd *conjuncta*, or *continens*, *quam posita, ponitur morbus, sublata tollitur*; 'tis only in humorals: always immediate *non contra*, as a Sword's the immediate cause of a wound, not the continent; plenty of meat, is *causa procatarcti*. *plethora antecedens*, blood flowing to the side *continens*.

Now the *evident* are contingent, as a Sword, &c. or necessary, as 6 *non-naturals*, to which add *contagion*, &c. the *antecedent* offends in *quantity*, or 1st and 2d *quality*; to which add *putrefaction*, *quantity*, (if not in defect, as in a hectic's) call'd *plethora*, *quality*, *cachochymia*. *Plethora's* a proportional redundance of all humors, or blood alone; *ad vasa* distending, or *ad vires* oppressing them, caus'd by hot aliments, &c. *Cachochymia*, by fault of coction, or 6 *non-naturals*, &c. contained are *stones*, *worms*, &c.

A hot distemper's caus'd by nearness to hot things, stay i'th' Sun, obstruction, motion of body and mind, &c. cold *è contra*; so

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so dry and moist from contraries ; compound have compound causes ; *Humor's* the cause of a material distemper. A *formal* depends on inward putrefaction, or from the air, caus'd by contact, foment, as in *lues venerea*, or at distance. In organic diseases figure is vitiated i'th'womb, by fantasie or error o' th' midwife, or after, from a fall, error of Surgery, &c. Passages are *dilated* by emollients, eroders, fulness, in *anastomosis*, *diæresis*, &c. *streitned* by obstrueters, *caruncula*, tumor growing to ligaments call'd *constipatio*, vacuation of humors *subsidentia*, or after a wound, &c. *coalescentia*. Magnitude's increas'd, by *humor*, *tumor*, or bond broke, refer'd to site diminish'd *è contra*. *Solution* of unity's caus'd from inciding, biting, cause, &c.

Accidental differences are necessary to be known by their causes, subjects, &c. A disease is caus'd by consent, by communicating morbid matter, *diadosis*, i. distribution, critically or symptomatically, or *metastasis*, i. translation to another part, or intercepting humors, &c. as i'th' Palsie the spirits. If the disposition be constant from symptoms, 'tis call'd *deuteropathia*, for sometimes a disease may be caus'd of a disease by connexion, nearness, society, likeness of parts. A disease is great by symptoms, cause, excellency of parts, &c. if short and great, 'tis *acute*, which

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which sort are *perperacuti*, ending in 4 days, *peracuti* in 7, *acuti* in 14, after *acuti ex decidentia*; if extended to 40 chronic. *continued* and *intermittent*; the intermission and paroxysm make a period; paroxysm's caus'd by new congestion, putrefaction, or motion of matter. *Diseases* are either *Sporades*, i. of divers kinds, invading many at once, as one with *ophthalmia*, another with a pleurisie; or *communes*, of the same kind, and seize divers at once, and are either *endemii*, i. familiar to one region; as *struma* to the *Spaniards*, &c. or *Epidemii*, seizing some region, either pernicious or not; these have common causes, *Sporades* particular. Lastly, diseases have 4 times, according to motion of morbidic causes; universal by reason of the whole disease, or particular in intermitting ones; the *beginning's* when the cause first sensibly hurts, or the time till coction appears; the *augment*, the increase of symptoms; *state* when the fight's most vehement; *declination's* only in salutary diseases. The paroxysms of intermittents have these times which agree with the universals. A relapse is the return of the same disease, though extinct, caus'd by morbidic humor, left after an imperfect *crisis*.

A symptom follows a disease, as a shadow the body; of it are three sorts, of action, hurt,

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minish'd by weak faculty, *deprav'd* in phren-
sies, *abolish'd* in cold, rarely in hot distem-
pers. 2. of *excrements* offending in *sub-*
stance, when good blood's evacuated, or
stones, worms, &c. *quality* as heat, putrefa-
ction, &c. *quantity* as too much evacuation,
retention: *manner*, as blood voided at the
dugs, eyes, &c. 3. *quality* chang'd, from
actions hurt, and excrements: colour vary's
from humors, taste from them, or excrements,
smell from putrefaction, or other affection of
parts and humors, and so of others.

SEMEIOTICA.

A sign's that which shews any other thing,
natural as weeping, or of institution as speech;
with Physicians, causes symptoms, effects, are
signs, and these shew health, sickness, or
neither; whence so call'd, as to bodies, cau-
ses, signs; of bodies in Physiology, Anatomy,
of causes in Pathology, signs here Unhealth-
ful signs are *diagnostic*, *prognostic*, or *anam-*
nesitic; whence taken, see Reports.

A part ill affected's known by action hurt,
excretion, site, pain, proper symptoms; to
which add sex, age, custom, &c. consent of
parts; an Idiopathic, *i.* primary disease is
permanent, a sympathetic irritated by a dis-
ease of another part, is quiet, or afflicts by
intervals; add things hurting or helping, as
remedies administred to one part hurt, or help
another.

The

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The *species* of a disease is known by 1. *excreta*. 2. *pain*, as a pricking one shews a sharp humor, stupid cold ; distending water or wind, heavy humors. 3. nature of a part, as *ophthalmia* to the eyes. 4. proper accidents, as qualities chang'd, actions hurt ; if abolish'd, argue a cold ; deprav'd, a hot disease. 5. from precedent causes, disposition of body, &c. a malignant one's known by its 1. nature, as *lues venerea*. 2. cause, as putrified air, corrupt humors, &c. 3. symptoms, if light, the patient, made weak, not eas'd by sweat and excretion, coldness of the extreme parts watchings, or drowfiness in the beginning, horrors, dropping at nose, light fever, pulse like one found, tongue grow black, exasperated, faints, 'tis malignant, & *contra*. of causes and humors before.

Pulse shews the hearts strength, *Urine* the nature of the *liver*. spleen, reins, vessels, &c. both to be minded, for rarely's bad urine with good pulse ; yet always remember this, *Pulsus incertus, urina fallax dejectiones fideles* ; but all subject to be alter'd by natural, non-natural, and preternatural things ; the absolute differences of pulses, are taken from space of motion, time, middle quiet, moving faculty, and moveable. The respective from the equality, inequality, order, proportion. The absolute are great, strong, and shew firm fa-

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culties; weak, &c. *contra*. quick, heat, fever, humor easily dissipable, flow, *contra*. often from a weak faculty, dangerous, hard, and languid together, a syncope, *sic de ceteris*.

Urin's to be inspected in the morning cold, within six hours; but see the Patient if you may. In it consider, 1. *liquor*, its substance, if thicker, or thinner, argue bad coction; thin, obstruction of veins, much drink, weak coction in the liver, and veins, in acute diseases, whence with weak faculty death, strong, long disease; abscess, relapse; in chronic, obstruction.

Thick's from mixtion of humors in the beginning, sign of fight with disease, after thin, a sign of security, very thick long pains, abscess, relapse, from oppression of heat.

Perspicuous, strength of heat; if thin and white too, crudity, phlegm, long disease; if so the 4th day in *acutis*, death.

Thick, turbulent, from stone in the reins, excrements of the bladder, crudity: piss clear after thickens, sign of coction beginning: *thick* after clear sign of victory; secretion of humors, &c. thick piss so remain worst, shews perturbation; doubtful combat *delirium*, imminent or present, pain in the head, convulsion, death

Copious, from much drink, diuretics, else ill; if not critical, as in ardent fevers, from

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colliquation, weak retention, heat of reins, *i. e.* diabete, little *e contra.* ill in *iliosis*, *morbis acutis*, *renum*, &c. stinking smell, is from putridness, ulcer, ill in acute, unless critical. *Color's* from mixtion of humors. *White* without fever, crudity, obstruction of the liver, &c. liberal drinking; with an acute fever dangerous, from weak faculty; bile flying to the upper parts, as in pleurisie, jaundies, threatens a dropsie, *aph. 7 2. l. 4.* white and thick flegm, pitchy, yellow, safrony, degrees of bile: reddish and thin, danger of abscess; reddish and thick, long disease; in fevers, inflammation of reins, liver, &c. length in the beginning, in the state death: *cruent* if critic good; else opening of the veins in nephritics; red from bile, with splendor, from blood not. *Leek-blade* color, adust, bile, putridness; *sea-green* from melancholy, sometime death, if not critic; black *idem*, sometime from black mixt humors, and may be critic, and safe in acute and chronic; in suppression of months, splenetics, quartanaries; if yellow preceded, 'tis from heat and ill. *Contents* are the *clouds*, *enaeorema*, i. that swimmeth in the middle, and sediment. In ~~ink~~, they come from a morbid humor, or if he live plentifully, from aliment. *Sediment* as in sound notes coction, in the middle less, in the cloud least; if it suddenly appear, shews quick *crisis* to health.

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if laudable, if ill to death. Want of *content* from crudity, combat of nature and disease, weakness, inflammation, obstruction, or great vacuation; not ill in sound, but oft in sick. If it have a good sediment, and suddenly not, labor and change from contumacy of the disease, or weak heat: red sediment long, but salutary disease, *aph.* 71. l. 4. black in acute worst; rough, contumacy; unequal, difficulty of coction; *varycolor'd*, now white, then red, &c. *varyfigur'd* now round then divided; in consistence now thick, now thin, all ill from difficulty of coction. *Copious* in the beginning crudity, in the declining *cæteris paribus* good; from *colliquation* come fat, oleous, pul-
tous, scaby, branny urines; from burning heat, sandy, stony, hairy: sands sticking to the glass side, are from the reins, and shew heat, in sick, fever; purulent and fætid an abscess; less fætid from the reins, than bladder, and's more mixt, without scales, pains in the loins, not groins; if in neither from the upper parts. *pinguous* mostly in pestilent fevers; *pultous* sediment from colliquate flesh, from burnt blood only, long disease, *aph.* 37. l. 7. *scaly's* not fætid if from colliquation, but deadly; from an ulcer fætid, *aph.* 81. l. 4. *branny*, not from an ulcer, and scaby bladder deadly, *aph.* 77. l. 4. *bubbles* from wind, and shew head-ach.

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In *dejections* note the substance, quantity, quality, manner of voiding; hard from heat inward or outward, much urine. *Si intercepta, alvus pauca, nigra, & in spiras circumducta dimiserit, & per nares eruptio fiat, malum, ob magnum incendium viscerum.* Liquid, crudity, in *lenteria*, *mesentery* obstructed, hindering the chiles passage, catarrh, colliquation; good in diseases if critic; not in the beginning, whence in *Coac. perliquida dejectio & multa neque quiescens in acutis, mala, maxime si abfuerit sitis, ob caloris extinctionem*: bad also with a swollen belly; in mild diseases length; after long ones bad, because it comes of weakness; small, white, light, glutinous, bad, 2 *prog.* 21. and fat from colliquation, if not from meat; hot, sharp, heat; cold, *è contra*, stink from meat or bad coction, putrefaction; color from humor, or medicine; *versicolor*'d ill, 4 *aph.* 21. if not from cathartics, then tends to better, 2 *aph.* 14. *fætid*, red, bilious, eruginous, choler go upward and downward, deadly. If liquid with sound, bad, and void often and little; frothy from a defluxion à *capite*, mixt flegm and wind, in acute from colliquation, with æstuous spirit: lastly, they ought not to be much and oft, for dissolution of spirits; nor little and often, for watching.

In

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In *sweat* regard 1. *quantity*, copious in the beginning, with strength a long disease, with weakness death, *aph.* 42. & 56. l. 4. few bad. 2. *quality*, cold, bad, always in acute death; in mild length, *aph.* 374. taste, color, &c. from humors; stink ill, in the beginning before *crisis*. 3. *time* best on a critical day, else length and relapse. 4. it must be universal; particular as head, &c. in acute death, in mild length; from what hath been said, may judgment be made of *Mucus narium*, *sordes aurium*, *saliva*, *sputum*, &c. *lacrymæ* the same with sweat and urine.

Prognostics are very difficult, they may in great part be made from what hath been said; in acute are no certain predictions of life and death; nor in the beginning if the disease ends not the 4th day. Errors of sick and servants chances, which the Artist can neither foresee, nor command; and *Hippocrates's aliquid divinum*, whether from the Air, Stars, Devil, Witches, &c. disturb *Pronogstics*.

The manner of the event's here to be regarded; if by *crisis* or *lysis*, needful in prescribing dyet and remedies; for in an instant *crisis* thinnest dyet; nor to bleed, purge on critic days; a fierce fight's *crisis*, none *lysis*; *crisis* is a sudden change to health, or death, chiefly health; 'tis nature concocts, separates, expels the morbidic humor: 'tis perfect with-

out

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the out fear of relapse, or imperfect and unfaith-
 vith ful, *contra*. A good *crisis* s, 1. with copious
 ad. excretion, or abscess; *trust not them that are*
 ; in eas'd without reason. 2. signs of coction, on an
 om indicating day, and critic day; for it hath
 fore place only in humoral diseases, and state, or a
 gth little before. 3. without dangerous symptoms,
 cu. and Patients ease. 4. it must agree with the
 th; nature of the disease, for a burning fever ends
 be in *hemorrhagia*, sweat, flux of the belly, vo-
 va, mit a chronic in *abscessu*. 2. Nature of the
 nd part, for the gibbous part of the liver's em-
 in ptied by urine, the flat by the belly. 3. tem-
 id; per, age, region, time, custom, sex, &c. signs
 nd of *crisis*, are causes and signs, as vomit, sweat,
 se &c. or signs only, as pain in the head, watch-
 r- ing, tossing, either precede, accompany, or
 er follow. The first shew the time, or kind,
 i- as sweat, &c. as if the urine have a laudable
 s, sediment the 4th day, 'tis judg'd the 7th, if
 e- no error on any hand; if the first or second,
 - 'tis ended the first quartanary. Grievous
 t symptoms precede an instant *crisis*, which
 n ought not to fright the Artist, if he see signs
 ; of coction, unless with malignity. A heavy
 night precedes a day *crisis*, a heavy day a night
 one: timely phlebotomy, gentle purging, as
 Hippocrates and Galen us'd, promote it, easing
 natures burden.

Various

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Various *species* of *crisis*, 1. by *hemorrhagia*, its signs are *plethora*, &c. its in burning fevers and inflammations. 2. sweat, its signs are suppression of urine, rigor, &c. head-ach, pain in the stomach, trembling of the lower lip, nauseousness, &c. precede vomit; a suppression of other evacuations, shews a *diarrhea*, the contrary a flux of urine. If none of these appear, a translation follows by abscess, if to a noble part death. A good *crisis* falls on a good day; now a days with Physicians 24 hours, and begins from the hour the sick felt an assault; but in childbed, if she be taken with a fever long after labor, count's to be made from the time of the fever, not labor; if soon after labor, *e contra*; if 'twas not natural, for then the morbidic humor began to be stir'd; if 'twas natural, begin from the day of the fever, for 'tis like the fever rose not from the agitation of the labor, but some other cause; so in wounds of the head, the count begins not from the fever, but wound; odd days are only critic and indicate; they fall in bilious diseases; if it begin the 3d, the 5th, and 7th, are critic, because bile hath a tertian circuit. If it begin from blood, the next day it draws bile into its company, which from its tertian circuit, the 4th is the first critic, from the beginning; but the 3d from biles motion, and so forward. Now days

are

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are *perfecte critici*, as 7, 14, 20. or indicating which shew a *crisis*, to come the 7th, and in salutary with signs of coction, as urine having light and equal sediment, the 4th shews *crisis* will be 7th; now they are 3; *quartus est index*, 7i. *undecimus*, 14i. 17s. 20i. which days are also often critical: or they are *intercident*; which are not *perfecte critici*, as in the first week, 3d and 5th, in the 2d, the 9th and 13th, in the 3d the 19th, which all follow the biles motion, the rest are vacant, neither judging nor indicating, and remedies are safely administred in them, as the 6th, to the 18th.

Forget not to take notice of the *Hypochondria's*, for if they be soft, equal, without pain, good, *e contra*, bad; so if hot, and other parts cold; if their pulse be great, shews madness; if contracted by inflammation of diaphragm, *peritoneum*, &c. *schyrrus*, inflated, inflam'd, painful all bad. Likewise note the habit and actions of the body, as *Hippocrates's* face worst; wherein are sharp nostrils, fallen tempils, hollow eys old, shrivel'd ears, hard forehead-skin, face black, livid, provided it came not from watching, flux, &c. so the bulk, *sect. 2. aph. 28.* whose body in fevers quickly diminish, shew weakness, *e contra*, length of disease.

THERA-

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THERAPEUTICA.

The Physician's to cure *cito, tuto, and jucunde*, by fit remedies and indications ; now *indication* insinuates what's to be done, strength be overcome nothing's to be attempted, the thing *indicating* shews what's to be preserv'd, or destroy'd ; the thing *indicated*, helps the indicating, and's unlike the cause and disease, but like the faculties ; coindicating's that which shews how, when, &c. any thing's to be done ; what hinders, contraindicates, that correpugns which lets secundarily, as bile indicates purging, strength coindicates, weakness contraindicates. In contrary indications, that's to be preferred which urges most, as weak faculties, &c.

The first indication's contrariety ; removing the cause, is call'd preservation. A similar disease requires altering ; but moistning heating's safer than cooling, drying : in organics obstruction desires openers ; in connex diseases sometimes one being cur'd, the other ceases not ; as inflammation in an ulcer's first to be remov'd. In causes the substance quantity, quality, place, motion, are to be regarded, stones, worms, &c. indicate ablation ; vapor, discussion quantity, vacuation ; quality, alteration ; motion of humors

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to the stomach vomit ; if immoderate, to be adstring'd or revel'd ; so humors in the first region vomit or purge, in the habit sweat. In motion consider 1. the part *mittent*, indicating revulsion. 2. *recipient*, adstriction, or derivation. 3. the *passages*, interception. If humors are too quiet, use attenuaters ; if impacted in the parts resolvers, sensibly or insensibly. *Symptoms* as pain, watching, &c. if urge, encounter first, or remove the cause, and they cease : conserve the faculties by diet ; the rest rather coindicate, than indicate truly. In parts consider 1. *temper*, a fever in a cold body's more dangerous, and requires colder remedies. 2. *action*, if private use remedies boldly ; if public, *contra* ; not all at once, but by intervals ; not omitting strengtheners. For *remedies*, nothing makes this noble art so conjectural as their quantity ; the times, motions, symptoms of diseases shew the time of using them. All the rest's in the Book.

Here for conclusion let me advise thee to beware of the Pseudochymical Cure of diseases by *likes* ; for if a Flux be cur'd by Purge, 'tis by removing the cause, or some accident, &c. likewise of *universal medicines*, so much cry'd up ; your *diabolical charms*, and *sigils*, &c. the *magnetic cure*, which they call *transplantation*, and *secrets*, of which two last more in this Book.

So

THE INSTITUTION.

So Reader farewell, and if these my pains
and endeavors be accepted by thee, in the
next Edition thou shalt have a compendious
Treatise of Operations, and particular Dis-
eases of the body, God sparing me life.



pain
n th
dion
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An Etymological Explication of Greek Words.

- A** *Neyroides*, ab *ancyra*, an Anchor, & *ideſtai*, to reſemble.
- Ancon*, ab *ana*, upon, *ciſtai* to reſe, becauſe one leans upon his elbow.
- Amoragia*, ab *kama*, blood, rein to flow.
- Acromion*, ab *acros*, the end, *omos*, ſhoulder.
- Anatome*, ab *ana*, often, *temnin* to cut.
- Anodyne*, ab *privative*, *odyne* pain.
- Aorte*, ab *air*, the air, *terin* to conſerve.
- Apozema*, a *de*, of, *zein* to boil.
- Apoplegmatiſme*, ab *apo*, far, *phlegmatizin* to ſpit.
- Apophyſis*, ab *apo*, out, *phym* to produce.
- Arteria*, ab *air*, *tirin* to conſerve.
- Arytenoidis*, ab *arytana*, the beak of an ewer.
- Aſtragalos*, ab *a* greatly, *ſtrephin* to turn.
- A** *Angrena*, de *grain*, to eat.
- Floutii*, de *glyin*, to be ſoft.
- Gonorrhea*, a *goni*, ſemen, rein *fluere*, to flow.
- Derma, cutis*, from *derin*, to flea.
- Diaphragma*, de *dia*, ſeparation, *phraſſin* to hedge.
- Dropax*, from *drepin*, to pull away.
- Lion*, ab *ilein*, to turn, or rowl.
- Emetic*, from *emein*, to vomit.
- Emminia*, ab *en*, within, *min*, month.
- Epigaſtrion*, ab *epi*, ſuper, *gaſtir*, venter.
- Epigonis*, ab *epi*, ſuper, *genu* the knee.
- Epibema*, ab *epi*, ſuper, *iithemai* to put.

Epiploon,

Epiploon, ab *epi super*, *plein* to swim.
Epispastic, ab *epi super*, *spain* to draw.
Epiphysis, ab *epi super*, *phyin* to beget.
Epulotic, ab *epi super*, *ouli cicatrice*.
Errina, ab *en*, *intra*, & *rin nasus*.
Erpes, from *herpin*, to creep.
Erythrois, reddish, from *erythron* red.
Erysipelus, ab *eryin* to draw, *pelas* nigh.
Eschar, ab *es super*, *cæin*, *urere*.
Thenar, a *thenin* to beat, or *thein* to put in.
Therapeutic, a *therapeuin*, to cure.
Tiblasma, a *tblain*, to bruise.
Thyroidis, a *thyreos* a buckler, *idis* like.
Thorax, a *thein* to leap, *orin* to conserve.
Ischion, ab *ischin*, to sustain.
Ichor, ab *icbin*, to attenuate.
Camara, *fornix*, a vault.
Clinoidis, a *cline*, a bed, *ideistai* to be like.
Concha, o' th' ear, a cavity like an oyster.
Coccyx, from a Bird call'd a Cuckow, like its beak.
Condylis, a *Camphin* to bend, or make crooked.
Coracoidis, a *corax* a crow, *idis* like its beast.
Cotylis, a *cotyli*, cavity.
Cranion, a *chein*, to dry, because dry.
Cremaster, a *cremain*, to suspend.
Cricoidis, a *cricos*, a ring, *ideistai*, &c. to be like.
Cystis, a *cyin*, to hide.
Colon, a *coin*, to pour out.
Conarion, de *cones*, a pyramid, because like it,
Larynx, de *la* greatly, *ryin* to cry.
Masseter, from *massain*, to chew.
Mastoid, a *mastos*, a dug, a *massin* to suck.
Metacarpon, a *meta* after, *carpos* the wrist.
Meninx, a *menin* to preside, *yinx* the brain.
Mys, a mouse, resembling one head.
Neurochondrodia, a *neuron* nerve: *chondros* cartilage.
Nephrirenes, a *rephrin* to moisten, *ouron* urine.

()

Xiphoidis, a xiphos, a sword, *ideſtai* to be like.
Odontrimmata, ab odous dens, *trin* to rub.
Pedema, ab idein, to ſweat.
Deſophagos, ab iin to carry, *phagin* to eat.
Olecranon, ab ole cubitus, *cranon caput*.
Ophthalmos the eye, ab opteſtai to ſee.
Pancreas, panal, *creas* fleſh.
Paracenteſis, from para with, *centein* to prick.
Pararthrema, a para nigh, *arthron* joint.
Paraſtatis cirſoides, a para nigh, *iſtaſtai* to be firm,
cirſos, *varix*, from *cirin* to dilate.
Pericranion, a peri about, *cranion* the ſcull.
Perioſtion, a peri over, *oſtion* the bone.
Peritoneon, a peri over, *tinin* to ſtretch.
Perone, metaphorically a needle, from *perin* to pierce.
Plethora, a plithos quantity, *ora* limit.
Pterna, de patin to march, *erra* the earth.
Sarcocoele, *ſarx* fleſh, *cele* a rupture.
Scirrhus, a ſcira plaiſter, being as hard.
Spasmos convulſio, a ſpain to draw.
Sperma ſeed, from *ſpirin* to ſowe.
Splen, the ſpleen, a ſpain, and *gli* groſs matter.
Spondyli, a ſphingin, becauſe bound together.
Sternon, a ſtain to be firm.
Stomachos, a ſtoma the mouth, *chein* to pour out.
Styloidis apophyſis, a ſtilos a pillar, &c.
Symptoma, a ſun con, *piptin* to fall.
Syſſarcoſis, a ſun con, *ſarx caro*.
Sphenoides, a ſphin a wedge.
Sphincter, from ſphingin to bind.
Tarſos, a tarſin to dry, becauſe 'tis a dry part.
Trochanter, a trochazin to run, from *trochien* to move.
Tripanon, from *trepin* to turn.
Hydrops, ab hydor water, *finin* to drink.
Hymen, from *hyin* to ſtretch.
Hypogaſtric, ab hypo under, *gaſtir venter*.
Hypochondrion, becauſe under xiphoid griſtle.

Hysteria

()

Hystera the womb, ab *hysteros* last, having the last place among *viscera*.

Pharinx, a *pherin* to carry, *yinx*, the voice, *yincry*.

Phthisis, from *phthisin* to corrupt.

Phlegmone, a *phlegm* *in* to inflame.

Pblebotomia, a *phlebs vena*, *temnin* to cut.

Chalastica, a *chalain* to relax, mollific.

Choane, a *choin*, to pour out.

Omoplate, ab *omos*, ab *ein* to sustain, *platys* large.

Trauma a wound, from *thrabin* to wound,

Cholagogon, de *chole* bile, *agin* to evacuate, so flees blood melancholy.

Colletica, glutinators, a *collao glutino*.

Cephalica, from *cephalos caput*.

Cardiaca, from *caer*, *cor*.

Catharetica, from *catharin* to cleanse.

Phænigmi, from *phaninx*, a red color.

Psilothra, from *psiloin*, to take away hair.

Smegmati, from *smæo* absterge.

Catheter, from *cata* within, *ein* to send.

Anthrax, from *ana* above, *thorein* to leap.

Phlyctanae, from *phlyzin* to boil.

Emphysema, ab *en* within, *physsain* to blow.

Azygos: ab *z* privative, *zygos* yoke.

Acrochordon, ab *acros* the end, *cordi* cord.

Anacatharsis, ab *ana* above, *cutaherin* to purge.

Empiria, ab *en* inter, *pira* experience.

Emplastrum, ab *en* within, *pelayin* to approach.

Crotaphoi, a *ceras* a horn, *phyin* to grow, the horns of beasts grow there.

Malactics, from *malassin*, to mollifie.

Melancholy, a *melas* black, *chole* choler.

Oncos, a tumor, ab *en* within, *echin* to contain.

V A D

VADE MECUM:

OR, A

Companion for a Chyrurgion.

TH E Artift being armed with thefe and the like Inſtructions, let him be provided with an handsome Emplaſter Box, furniſhed with theſe Inſtruments following, alwayes kept bright and ſharp, viz.

Incision Knife,
 Ciſſers,
 Forcipes,
 Plain Spathula,
 Spathula, or Speculum
 Lingue,
 Single, and Screw
 Probe,

Uvula Spoon,
 Sticking Quill, with
 three Chyrurgions
 Needles, of ſeveral
 ſizes.
 Director, with Specu-
 lum Oculi,
 Fleme,

Having alwayes therein ſome *Emplaſtrum*
diapalm. de Minio, or ſuch like, ready ſpread
 upon Linnen Cloth, with Lint, and *Thuraloes*,
 ſuch like aſtringent Powder.

B

The

2 *V A D E M E C U M*: Or,

The Lint is to make Plegets, and Tents &c. of, and sometimes to stay a Flux of Blood.

Pulvis Thurales is made of two parts of *Frankincense*, and one of *Aloes*, finely powdered and when you have occasion to use it, mix much of it with the white of an Egg, as will render it of the consistence of Honey; which with the softest hair of a Hare, apply upon Lint to the Vessels, or other part, and about the Wound, using fit Ligature. Likewise some cathartic, or corrosive Powder, to eat away putrid or superfluous Flesh, which is made of burnt *Alum*, Powder of *Mercurius precipitate*, and such like.

Emplastr. Diacalciteos, or *de Minio*, or such like, is to be applied over all your other Medicines, to keep them firm to the part where you cannot use convenient Ligatures &c. and sometimes when you can.

His *Salvatory* should be furnish'd with the Unguents following, viz.

| | |
|------------------------------|----------------------------|
| <i>Basilicon Majus</i> , | <i>Linimentum Arcei</i> , |
| <i>Ægyptiacum</i> alone, or | <i>Ung. Album</i> , |
| mixt with <i>Basilicon</i> , | <i>Desiccativum Rubrum</i> |

Then let his Closet or Chest, in time of Peace or War, be furnished with such Instruments and Medicines, Simple and Compound

as shall be hereafter mentioned ; where shall be set down the use of every particular Instrument, and Faculties of every Medicine, and Dose and manner of making and using.

But first of those in the *Plaster-Box* and *Salvatory*.

Certain Instructions concerning the use of the Instruments in the *Plaster-Box*.

And first of the Incision Knife.

THE use of this Instrument, is to cut the Skin or Flesh upon needful occasions, in paring away the putrid part of a Gangrenous Member, in making Fontanella's, or Issues, in opening Apostemes, in Scarifications, &c.

Let this Instrument be alwayes kept clean and bright, by being rubbed dry, after it hath been used, and sharp as any Razor. Let the Artift ever hide it from the Patients sight with a Cloth, and also all other sharp Instruments, for divers Reasons.

Of the ordinary Scissors.

THE Scissors be very useful to cut Cloth for Roulers, Lint, and Emplaisters; to cut, and clip off loose Skin, putrid or superfluous Flesh, &c.

Of the Spathula.

THE Spathula is used to mingle your Unguents on your palm of your hand, to cover your Plegets, &c.

Of the small Probes.

THE Probe cannot be missing in the Chyrurgions Plaister-Box, for without it can nothing be done artificially. The use of it, is to arm the Eye with soft Lints, and with the other end to make probation of the depth of a Wound: sometime the small end armed with Lint, is dipped in some Oil, or Liquor, and conveyed into the bottom of an Ulcer, or Fistula, thereby to mundifie, and heal.

Of the Scrue-Probe.

IS as long again as an ordinary Probe, made to unscrew in the middle, and is used when

where the small Probe is too short to make sufficient probation.

Of the Uvula Spoon.

THis serveth to put Pepper, Salt, and fine Bole in, by putting it under the Uvula, or Palate of the Mouth, being fallen, and blowing the Powder into the Cavity behind it thorow the hollow Pipe: It also serveth to warm a Medicine in, as Unguents to dip in Tents when you want an ordinary Spoon; also to pour hot Oil or Liquor into a Wound, whereto I do constantly use it in green Wounds, as hereafter you shall find in the ensuing Discourse, of curing of Wounds.

Of the Sticking Quill and Needles.

THese are Instruments that cannot be misfed in your Plaster-box: you shall therefore have in your Sticking Quill at least three Needles of several sizes or bigness, with square points, well set, and ready armed with green or red Silk oyled, your Needles alwayes kept oyled, and clean from rust; in want of Silk, at any time upon necessity, you may use thread, rubbing it with some kind of Emplaister: You must also have in your said

6 *V A D E M E C U M*: Or,

Stiching Quill a Taylors Needle, or two with thread, to sowe your Roulers, and make them fast in the rouling of Wounds, Fractures, or Dislocations, &c.

Of the Director.

THE Director is an Instrument to guide and direct the Incision Knife, in Dilatation, or enlarging a Wound, when you are near any Vessels. They are also used in cutting for the Stone.

Of the Forcipes.

THese are used to take off Emplasters, Pledgers, and Tents, to take out a splinter of a Bone, to hold up any piece of superfluous Flesh or Skin, thereby the better to cut it with the Scissors, or Incision Knife; to take out any thing that may chance into the Ear, Nostrils, Mouth, or Throat; to take out a Bullet lying within reach, or any thing that is offensive in a Wound; and is an Instrument of continual and very necessary use in Chyrurgery.

Of the Spathula Linguae.

THE *Spathula Linguae*, or *Speculum Linguae*, is much like an ordinary *Spathula*

with at one end , only it is perforated and cut
hem through, the better to hold the tongue down
, or without slipping off ; the other end is made
to scrape the tongue that is furred in Fevers,
Cankers, or other affects of the mouth ; it is
uide used to hold down the tongue when you in-
Dila-ject any liquor into the throat, or apply any
are medicine to the mouth or throat, or when
cut you would make inspection into the mouth
or throat in any affects of the Uvula , or in
Squinancies, Cankers, or Excoriations of the
mouth or gums.

f 2 the Fleme.

ters
spli **I**S an Instrument used to open Gums, and
rflu separate them from the tooth you in-
cut tend to pull out , compassing the tooth with
; to the round sharp end thereof close to the
o the tooth , piercing deeper by little and little, un-
ou til you feel it as low as the jaw-bone : Some
tha use to open a vein with this Instrument , but
nem for mine own part , I do disallow it as very
Chy uncertain , and dangerous, for touching the
Nerves, or great vessels.

Next we must look into the *Salvatory* to see what *Unguents* we have there to declare the Composition of them their Virtues and Uses. But first we must say somewhat of *Weights, Measures, and Scales*, used in Physick.

Weights, Measures, and Scales.

AR E things upon which depend oftentimes the life or death of the Patient let the Artist therefore be stored with several pair of Scales, for Pounds, Ounces, Drams and Grains, with good even Beams, both them and the Pans kept clean scoured; now because many having Scales and Weights scarce have the true knowledge of them, will therefore set down what kind of Weights we ordinarily use.

A Grain is the least Weight used in Physick, and is marked thus—Gr.

Twenty Grains make a Scruple, marked thus— \mathfrak{z} .

Three Scruples make a Dram, marked thus— \mathfrak{z} .

Eight

Eight Drams make an Ounce, marked thus

— ζ .

So that there are as many Scruples in one Ounce, as there are Letters in the Alphabet, viz. 24. as the Poet *Fannius* testifies,

*Uncia fit drachmis bis quatuor unde putandum
Grammata dicta, quod hæc viginti quatuor in se
Uncia habet, tot enim formis vox Græca notatur,
Horis quot mundus peregit noctemque diemque.*

Twelve Ounces make a Pound, and is marked thus — lb.

The half of any thing, thus — ss.

The usual sorts of *Measures* used in Physick, are,

Cochleare, or a spoonful, which of Syrrups, &c. contains half an ounce, of distilled waters three drams.

Cyathus, which comprehends one Ounce and an half.

Congius, which comprehends eight Pound.

Manipulus, or handful, as much as the hand can comprehend, marked thus — M.

Pugillus, as much as can be taken up with thumb and four fingers ends, thus — P.

A Pint is one Pound, marked thus — Pint.

Numero & Paria, so Fruit are measured, marked thus — No. & Par.

Ana. is a like quantity that follows of two or more things before mentioned; or if no quantity follows, then the quantity must be equal, marked thus—*an.*

Partes aequales, equal Parts of all are to be taken, thus—*p. a.*

Quantum sufficit, thus—*Q. S.*

Quantum vis, thus—*Q. V.*

Quantum placet, thus—*Q. pl.*

All these are, when the Weight or Measure is left to the freedom of the Apothecary.

Scundum Artem, marked thus—*S. A.* is when the manner of Componding is left to the Apothecary.

Stratum super Stratum, marked thus—*S. S. S.* is when two things are strew'd by turns one upon another.

Balneum Mariæ, or *Maris*, marked thus—*B. M.* is when any thing is boiled or distilled in a Vessel or Alembic, put into another Vessel full of boiling Water, and so kept boiling or distilling therein.

Now of *Unguents* in the Salvatory, but first we must premise something of *Unguents* and *Liniments* in general.

Unguents were for delicacy among the Ancients, in Greek *myra*; Now they are thicker than Liniments: the simple are made

made of Oil, Wax, Powders ; to one Ounce of Oil $\mathfrak{z}\text{i}$, or $\mathfrak{z}\text{i}\mathfrak{ss}$. of Powder, two drams of Wax, for hot ones : But in cold, drying, detarging, which consist of Minerals, as *Tutia*, *Minium*, *Plumbum*, half an Ounce, to an Ounce ; unless they are corroding, as *Aerugo* $\mathfrak{z}\text{ii}$. *Chalcitis* $\mathfrak{z}\text{i}$. *Hydrargyr* $\mathfrak{z}\text{i}$. *Sublimat.* Gr. vi. *Sulphur vivum.* $\mathfrak{z}\text{i}$. *Arsenic.* Gr. ii. for $\mathfrak{z}\text{i}$. of Oil. Sometimes are added Juices, or Shop-oynments, to $\mathfrak{z}\text{iii}$. Powders $\mathfrak{z}\text{vi}$. Wax, Oil, *q. s.* in hot Weather more Wax than in cold ; instead of Oil may be used *Butter*, *Grease*, *Mucilages*, *Marrow*, *Turpentine* ; so for Wax, use *Rosin*, *Colophony*, *Pix*, the same Doses. Some are made without Fire or Wax, of Oils, Powders, Metals, and Juices, stir'd in a Mortar, whence call'd *Nutrita*, to refrigerate, and for malignant Ulcers, commonly for $\mathfrak{z}\text{i}$. of Oil, half an Ounce of Powders ; yet 'tis best to prescribe of Powders, *q. s.*

Now a Liniment in general is made of only Oil and Butter, or else may be added, Fats, Grease, Suet, Marrows, Mucilages, so that there be two or three parts of Oil to one of the rest. Sometimes to $\mathfrak{z}\text{i}$. of Oil, is added $\mathfrak{z}\text{i}$. of proper Powders Sometimes Wax, or some Shop Unguent $\mathfrak{z}\text{i}$. of Wax to $\mathfrak{z}\text{i}$. of Oil, but equal parts of the Oil and Unguent ; 'tis used to ease pain, to laxate the parts, to soften, digest inflammations, calesy, humect and resolve.

Now

Now in particular, and first of Basilicon.

B*asilicon* is an Unguent used almost in all kinds of Wounds, and Ulcers, either by its self, or mixed with other Unguents; for it hath the virtue to heat, humect, and mitigate pain: it digesteth and incarnateth Wounds and Ulcers, and suppuraeth Apostemes, either hot or cold. It is likewise very fitly used with Præcipitate, *Ægyptiacum*, or any corroding Medicine, making them work with more ease, and better mundifies: it is also good for Burnings and Scaldings, and is thus made:

Rx. Yellow Wax, Pine Rosin, Ox-Suet, Greek, or Ship-pitch, Turpentine, Olibanum, Myrrh, of each ʒi . Oil. ʒv . the rest being melted, sprinkle in the gums, boiling them to a fit body.

Liniment of Arcaus.

THIS Arcaus's Liniment is a sovereign Balm, not to be sufficiently commended in all Wounds whatsoever, especially in those of the Head, where it doth meerly of it self, all the intentions of healing, extraneous Bodies being first remov'd, and the Flux of Blood

blood quite stay'd; for it digesteth, mundifieth, incarnateth, and cicatrizeth. it defendeth from accidents, and is very anodine: I have divers times applied it, mixed with other Unguents, to painful Ulcers, and Fistula's, with good success; it is made as followeth:

℞. Gum Elemni } of each an ℥
Turpentine of the Firr-tree } and half,
Rams Suet old and tryed, ℥ ii.
Old Hogs fat tryed, ℥ i.

Dissolve the Gum in Sack, and evaporate the Sack, then put in the Fats, and lastly the Terebinth, and mingle them well together.

Aegyptiacum

DEterges and mundifies old, sordid, virulent and fistulous Ulcers; prevents great contused Wounds from Gangrenes, &c. is thus made.

℞ Verdegrease five parts, unskum'd Honey 14 parts, strong Vinegar seven parts. Boil the Vinegar and Honey a little, then add the Verdegrease, and boil it over a gentle Fire, to a just thickness and red colour, *S.A.* some add Alum one part.

Instead of *Unguent. Apostolorum*, to cleanse and scour foul Ulcers, to make good ground
for

14 *VADE MECUM*: Or,

for healing, and abate spungy flesh, use al-
ways *Mundificativum ex Apio.* or *Ægyptiac.* or
Ung. Basilic. two parts, and one of *Ægyptiac.*
or *p.æ.* as you see cause, you will find it cleanses
better.

Mundificativum ex Apio.

℞ The juice of Smalage ℥ i. honey ʒ ix.
Wheat-flower ʒ iii. boil them till they come
to the thickness of an Unguent *S. A.*

Unguentum Album Camphoratum

IS good to cool and heal any hot moist
Pustles; it cureth Excoriations of the
Skin in any place, but chiefly in the Yard, be-
twixt *glans* and *praputium*; it also healeth
burnings and scaldings very well, and is good
to be applied to any painful Ulcer, for it al-
suageth pain, and healeth well: it is cold
and anodine, is made as followeth:

Of unripe Oil of Roses ʒ ix.

Cerufs washed in Rose-water, and finely
poured, ʒ iii.

White-wax, ʒ ii.

First melt the Wax in Oil, then cast in the
Cerufs, and if you will have it with Cam-
phore, then add to this proportion of Cam-
phore ʒ ii. poured with a few drops of Oil
of Sweet Almonds.

Infla

Instead of *Unguent. Diapompholigos* in painful Ulcers in any part of the Body, especially of the Yard, or betwixt *glans* and *præputium*, you will find any of these, *ung. alb. populn. rosat. desiccat. rub. nutrit. &c.* alone, or ingeniously mixt, to be far better.

Desiccativum Rubrum

IS used to cicatrize Ulcers, either by its self, or mixed with *Ung. Rosat.* it is thus made:

Oil of Roses Omphacine, 1 lb. and an half.
White Wax, 3 v.

Melt them together, and put them into a leaden Mortar, and sprinkle into them

Earth of *Lemnos*, or Bole Armeny } of each
Lapis Calaminaris finely beaten } 3 iv.

Litharge of Gold } of each 3 iii.
Ceruss }

Camphire 3 i.

Work them all very well together in the Mortar, to the form of an Unguent.

These are for the *Salvatory*: Next I shall shew you the making of *Emplasters*, with their uses, and then take the rest in order.

But

But first of Emplaſters in general.

E*Mplaſtrum* was written by the ancient Greeks without an *r*, but the modern and after them the Latines, with an *r*, from *Emplattein*, ſayes *Heurnius*, i.e. *ſingendo*, *formando*, 'tis thicker than an Unguent or Cerat made of the ſame things, as of Plants, Minerals, Earth, Aſhes, Excrements, and all parts of Animals. Some to ζ iii. of Oil, add ζ i. of Pouders, and one of Wax. In lieu of Wax, ſometimes is put *labdannum*, *propolis*, *pix*. Sometimes Gums are added to ζ vi. *Lytharge*, *Ceruſs*. then you muſt augment the quantity of oil; but if you add *axungia*, *terebinth*, or any liquid *lacrym*, you muſt diminifh your oil. firſt melt the Wax in the oil, if you add *Lytharge*, Juices, or Mucilages, boil them together till they be waſted, then mix in your Fats, Roſins, Gums, either pure or diſſolved in proper liquor, as Wine, Brandy, Vinegar, or proper juices; when they are all almoſt boiled enough, ſprinkle in your Pouders, ſtirring them very well, with a *Spathula*, till they come to be a fit maſs; when they are almoſt cold, put in your Saffron, Muſk, Amber, and ſuch things as will not endure boiling; you may know when 'tis boil'd enough, if putting a little upon a Stone, or into the Water

to cool, it will not stick to your fingers. Spread it upon leather oval, or in the form of a T. for the head, and so in form answerable to other parts, as four-square for the reins, &c.

Now of Emplasters in particular, and first of Stipticum Paracelsi. And here

Quid dignum tanto ferat hic promissor hiatus?

TIS a Wonder to see how this Plaster is extoll'd by the Author, and what strange, idle things are promis'd to be perform'd by it, when they're nothing but clouds without rain; in short you have *Oxycroceum Diachyl. mag. cum Gum.* and others as good to all intents; however the making of it is as followeth:

R Oil of Olives ℥vi. yellow Wax, ℥i℥. Litharg. of Gold sears'd ℥iiii℥. *Ammoniac. Bdellium. an. ℥℥. Galbanum, Opopanax, Oil of Bayes, Lap. Calaminar. Aristolochia long and rotund, Myrrhe, Thus, an. ℥ii.* clear Turpentine ℥i. Boil the Oil and Litharge together, stirring them continually with a wooden *Spatbula*, till they will not stick to your fingers; then taking them from the Fire, melt in the Wax, presently after put in the Turpentine and Gums mixt before, lastly the Pouders, and when all begin to cool the *Thus*, and at length the Oil of Bayes, that you make an *Empl. f. a.*

Diacal-

Diacalcitheos, or Diapalma,

IS an Emplaster that mitigateth pain, and is a good defenſitive againſt all venomous Humors, and is uſed laſt in Wounds, and Ulcers, to induce a Cicatrice, which it is very good for; alſo it hath a very good quality to aſſuage the pain in the ſmall of the back, proceeding from diſtempered kidneys coming from a hot cauſe, as well concerning the Stone and Gravel, as in the Gonorrhea: and diſſolve or relented with Oyl of Roſes, or Elders, or of Linſeed, it is a very good Medicine to heal Burnings and Scaldings.

I do uſe it in Fractures after the firſt opening, covering the member at leaſt two hand breadth upon the Fracture, with the Emplafter ſpread upon Cloth; and in great Inflammations in Summer-time, I diſſolve it in Oyl of Roſes, and ſo apply it to the Fracture: it is thus made:

℞ Hogs fat freſh and old, and cleaned from the Skins, lb ii.

Old Oil, Scum of Silver, beat and ſearced of each lb iii.

White Vitriol burnt and powder'd, 4 3.

The Lytharge, fat and oil muſt be boiled together over a gentle Fire, (with a little

Plantain

Plantan water) almost to the consistence of an Emplaster, continually stirring them; then taking it from the Fire, put in the Vitriol.

Empcastrum Griseum, or of Lapis Calaminaris.

THis Emplaster I do commonly use in healing Ulcers, which are hard to cicatrized; and it is marvellous good in curing Buboës, as well venereal and pestilential, as common: it is also the most incarnative of any Emplaster that is in use. The composition is, after this manner:

| | |
|------------------------------------|----------------|
| <i>R.</i> Lapis Calamin. prepared, | 1 ounce. |
| Litharge | 2 ounces. |
| Cerufs | half an ounce. |
| Tutty | 1 dram. |
| Turpentine | 6 drams. |
| White wax | 1 3. and half. |
| Harts-suet | 2 ounces. |
| Choice Frankincense | 5 drams. |
| Mastich | 3 drams. |
| Myrrhe | 2 drams. |
| Camphor | 1 3 and half. |

Let the Terebinth, Wax and Suet be mixed together, then a little after cast in *Thus*, *Myrrbe* and *Mastich* powder'd; to which well mixt, let the Powders of *Cap. Cal. Lithar. Cerufs*,

Cenſs, *Tutia*, be added ; laſtly, theſe being cold, put in your Camphor, diſſolv'd in a little Spirit of Wine.

Of the Melilot Emplaſter.

THis Emplaſter is good in green Wounds for it draweth, and healeth well ; alſo it attracteth and bringeth forward a corruptiſh Apoſtume, and is made of the juice of Melilot, Camomile, and Wormwood, with Roſin, Turpentine and Wax, and is an eſpecially ſecret, and the beſt, and oneliſt thing ever knew in curing kibeſed heels, and chilblanes, either broken, or before they are broken ; I do uſe it often upon Gun-ſhot wounds to keep the Oriſice open, and to warm and comfort the parts.

Of Diachylon Simplex.

THis Emplaſter is very good to diſſolve ſchirrous Tumors of the Liver, Spleen, Reins, Belly, or elſewhere, as the compoſition will ſhew, being all of mollifying and diſſolving Ingredients ; it ſerveth generally for both hot or cold cauſes, but chiefly for hot. It is much uſed to Womens breasts in Childbed when they deſire to dry up their milk, being ſpread upon linnen Cloth, and applied over all the

ng breast, and towards the arm-pit. It is thus
n a compounded :

℞. The ꝑmucilage of Fœnugreek-feed,
Linseed, and Marshmallow roots , of each
one pound.

ound Clear old Oil, three pounds.

l; al Litharge, one pound and half.

co The way to have the quantity prescrib'd
Me of mucilages is this :

h R℞. of each three ounces, of common wa-
pecer lb vi.

ing Let the Litharge be finely beaten, and put
chi to the Oil, and boiled with a gentle Fire, stir-
e bring it well with a *Spathula*, until they grow
und thick as Honey ; take them from the Fire, and
a let them cool awhile, then pour into the Pan
your mucilages, and mingle them well , and
boil them to an Emplaster of good consist-
ence.

r To *Diachylum Iriatum* is made, by adding ʒi.
blee of *Oris* roots, to lb i. of the simple Plaster.

litio *Diachylon magnum, and with Gums.*

scu **T**His *Diachylon* dissolveth, maturateth, and
r h mollifieth hardnesses, and is principally
qu good in Apostemes, and is compounded af-
wher this manner :

the R℞. Litharge of Gold finely searced , one
rea pound. Oils

Oils of Ireos, Dil, Camomile, of each eight ounces.

The mucilages of Marshmallow roots, Linseed, and Fœnugreek-feed, Raifons, Figs, Birdlime, Juice of Ireos, and Sea-onion Oesypus, or Oil of Sheeps-feet, of each drams and a half.

Turpentine, three ounces.

Rosin of the Pine, yellow Wax, of each two ounces.

Let the Litharge, being finely powdered, be stirred a long time with the Oil, be boiled over a gentle Fire, continually moving till they wax thick; then taking the Pan from the Fire, when it grows cold, add the Mucilages, being first boil'd in the Oils, and strained, and boil them softly, to the evaporation of the superfluous moisture; after add the Birdlime and Oesyp dissolv'd in the juices of Onions and Squils, and let the juices be wasted; all which yet hot melt your Rosin and Wax a little after taken from the Fire add Turpentine, moving all diligently, that the whole mixture be of a fit consistence for a Plaster then

R. Bdellium, Sagapenum, Ammoniacum, of each two ounces.

Dissolve the Gums in Wine, strain them and boil them to the thicknes of Honey, and put them to the aforesaid mass of Emplaster

and so you have *Diachylon magnum cum gummi.*

Emplastrum Oxycroceum

IS anodine, attracting, mollifying, and comforting; assuageth pains of the Gout, proceeding of a cold cause, and is good in cold Aches; and by the attracting virtue it hath, it draweth out vapors *per poros cutis*, or the sweat vents in the skin, whereby it often unladeth the Body of vicious and naughty humors, which otherwise might endanger the Patient. It is thus made:

Rx. Saffron, two ounces and an half.
Ship-pitch, Colophony, yellow Wax, of each four ounces.

Turpentine, Galbanum, Ammoniacum, Myrrhe, Olibanum, Mastich, of each one ounce and three drams.

To the melted Wax, add the Pitch purg'd from filth, and strain'd, the Coloph. with these taken from the Fire, and a little cool'd, mix your Galbanum and Ammoniacum dissolved apart in Vinegar, strain'd and boil'd to the consumption of the Vinegar, and mixed with Terebinth; then sprinkle in *Thus*, Mastich, Myrrhe, finely powder'd apart; lastly Saffron most rarely powder'd, stirring all well. *F. Empl. S. A.* Some omit the Saffron.

Emplastrum

Emplastrum de Minio.

THis red lead Plaster discuffeth humors, assuageth pains, mollifieth, repelleth; and is commonly used upon wounds and ulcers, for further good healing, and induce a cicatrize; it is used in bruised and wrenched joints; you use Mr. Gales composition which I have made use of several times; and also both to mundifie, incarnate and cicatrize.

The composition of the ordinary Minium Plaster sold in shops, is as followeth:

℞. Red Lead, nine ounces.

Oil of Roses, one pound and half.

White-wine Vinegar, six ounces.

Boil them to the just consistence of an Emplaster; let your red Lead be beaten, and searced very fine; boil your Oil and Vinegar together till half the Vinegar be wasted, then put in your Minium, and boil it till the Vinegar be quite consumed, and the Plaster looketh blackish.

It is also prepared without Vinegar, in the same manner:

℞. Red Lead, one pound.

Oil of Roses, one pound and an half.

Yellow Wax, four ounces.

First put your Oil on the Fire with your Minium finely powdered, boiling it with

ring until the colour change to blackish; then slice in the wax, and boil it to the just consistence, or you may omit the wax.

If you have *Oxycroceum*, there's no need of *Ceroneum*.

Emplastrum ad Herniam.

ITs Name shews it's good against Ruptures, Abortion, &c.

Rx. Gallar. Cypress, Nuts, the Barks and Flowers of Pomegranats, Acacia, the Seeds of Plantan, Fleawort, Watercresses, Acorn Cups, dried Beans, long and round Birthwort, Myrtles, of each ʒ℔. Let all these be pulveriz'd, and macerated for four dayes in Rose Vinegar; then let them be well dry'd: After Rx. of great and little Comfrey, Horsetail, Woad, Ceterach, Roots of Royal Osmund, an. ʒ i. Thuris, Myrrhe, Aloes, Mastich, Mummy, an. ʒ ii. Bole Armeny wash'd in Vinegar, prepar'd Lapis Calaminaris, Lytharge of Gold, Sang. Dracon. an. ʒ iii. Ship Pitch ℔ ii. Terebinth ʒ vi. or q. s. F. Emplastrum s. a.

Emplastrum de Ranis cum Mercurio,

IS good against Sores, and Pains in *Lue Venerea*; 'twas invented by *Vigo*, and is thus made: C Rx. Six

R. Six live Frogs, Worms wash'd in Wine \mathfrak{z} iiii. Oils of Camomel, Dil, Spike, or broad leav'd Lavender, drawn by Distillation, Lillies an. \mathfrak{z} ii. Bayes \mathfrak{z} i. of Saffron \mathfrak{z} i. of Porks and Calves fat, an. \mathfrak{lb} i. of Vipers Grease, \mathfrak{z} iiii. Euphorb. \mathfrak{z} v. Thuris \mathfrak{z} x. the juice of the root of Enula, and Dwarf Elder, an. \mathfrak{z} ii. Scabranth. Stechad. Motherwort with Flowers, a M. i. odoriferous Wine \mathfrak{lb} ii. Litharge Gold \mathfrak{lb} i. Terebinth \mathfrak{z} ii. Yellow Wax \mathfrak{z} iiii. Take the Frogs, Worms and Herbs, with the juice and oils of Camomel, Dil, Lillies, and the rest of the Wine be boil'd together; to the strainer add Lytharge, Wax cut small, and the other to a pint of Wine. Boil them again to the absumption of all the Wine, and till it will not stick to your fingers; then add your Oil of Saffron, Bayes, Spike, and Vipers Grease, then the Powders of Euphorbium and Thus: lastly to the mass when cold, add the Quicksilver well mixt with Styraque and Terebinth, stirring all very well with a Spathula. F. Empl. s. a.

Emplastrum Diasulphuris.

THIS Emplastrum Diasulphuris is most excellent in the Cure of all Ulcers, of what sort soever, and is made as followeth.

R. Oil of Brimstone \mathfrak{z} iiii. Wax \mathfrak{lb} i. Colophony \mathfrak{z} iiii. Myrrhe, as much in weight as the Wax well ground.

as all the rest. Melt the Wax and Colophony in the Oil, and mix them well, then sprinkle in your Myrrhe finely powdered, and boil them with a gentle fire, ever stirring it with a Spatbula until they are well mingled, then take it from the fire, and make it up.

Sir Philip Paris his Emplaster.

THis Emplaster is excellent for divers things; if you lay it upon the stomach, it provoketh appetite, and taketh any grief from the same; laid to the belly, it easeth the Collick speedily; laid to the Reins, it stopeth the bloody flux, running of the reins, heat of the kidneys, and weakness of the back; it healeth swellings, aches, bruises; it breaketh fellons and apostemes, and healeth them; it draweth out humors without breaking the skin; it healeth the diseases of the fundament: laid upon the head, it helpeth the head-ach, uvula, and eyes: laid to the belly, it provoketh the months, and openeth the matrice for conception. The composition is as followeth:

R. Common Oil ℥ ii. Red Lead, Cerniss, of each ℥ i. beaten small. Castle-soap ℥ xii. incorporate these well together in an earthen Pan well glased, before you put them to boil; then put

Rx. Six live Frogs, Worms wash'd in Wine \mathfrak{z} iiii. Oils of Camomel, Dil, Spike, or broad leav'd Lavender, drawn by Distillation, Lillies an. \mathfrak{z} ii. Bayes \mathfrak{z} iiii. of Saffron \mathfrak{z} i. of Porks and Calves fat, an. lb. i. of Vipers Grease, \mathfrak{z} iiii. Euphorb. \mathfrak{z} v. Thuris \mathfrak{z} x. the juice of the root of Enula, and Dwarf Elder, an. \mathfrak{z} ii. Schell nanth. Stechad. Motherwort with Flowers, an. M. i. odoriferous Wine lb. ii. Litharge Gold lb. i. Terebinth \mathfrak{z} ii. Yellow Wax \mathfrak{z} iiii. Boil the Frogs, Worms and Herbs, with the juices and oils of Camomel, Dil, Lillies, and the rest of the Wine be boil'd together; to the strain'd add Lytharge, Wax cut small, and the other half pint of Wine. Boil them again to the absumption of all the Wine, and till it will not stick to your fingers; then add your Oil of Saffron, Bayes, Spike, and Vipers Grease, then the Powders of Euphorbium and Thus: lastly to the mass almost cold, add the Quicksilver well mixt with Storace and Terebinth, stirring all very well with Spathula. F. Empl. s. a.

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THIS Emplastrum Diasulphuris is most excellent in the Cure of all Ulcers, of what sort soever, and is made as followeth.

Rx. Oil of Brimstone \mathfrak{z} iii. Wax lb. i. Colophony \mathfrak{z} iii. Myrrhe, as much in weight as the Wax.

as all the rest. Melt the Wax and Colophony in the Oil, and mix them well, then sprinkle in your Myrrhe finely powdered, and boil them with a gentle fire, ever stirring it with a Spathula until they are well mingled, then take it from the fire, and make it up.

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R. Common Oil ℥ ii. Red Lead, Cerniss, of each ℥ i. beaten small. Castle-soap ʒ xii. Incorporate these well together in an earthen Pan well glased, before you put them to boil; then put
C 2 *them*

them upon a gentle fire of coals, ever stirring it with a Spathula, then increase your fire till the red turn grayish, continuing your stirring drop a little upon a trencher, if it cleave thereeto, then it is enough; dip linnen cloath therein, and smooth them with a sleek-stone, then rest make up in rolls; it will last twenty years.

A Cerat,

SO call'd from Wax it is made of, harder than an Ointment, and softer than an Emplaster: 'tis made by adding Wax proper Powders $\zeta ii.$ to $\zeta i.$ of oil, or other things analogous; or 'tis made of Unguent in the shops, by adding to $\zeta ii.$ of the Unguent, $\zeta vi.$ of Wax, or $q. s.$

Sparadrap,

IS a barbarous word, 'tis made by dipping a Cloth into any Plaster that hath acquired its due coction; 'tis commonly called *Tela Galteri*. The Learned Sir George Ender and best for Issues, is thus made:

Rx. Yellow Wax lbss. Terebinth. Minii $\zeta iii.$ Cinnabar, Oris Root an. $\zeta i.$ mosch. galeget
Melt your Terebinth and Wax together, then add the Powders made up with a little common Calms

that they may the easier mix; among which, let the Cinnabar and Minium be finely powdered: stir them a great while very well, then add the Mosch dissolv'd in aq. ros. while they are yet hot, dip in a cloth a little worn, ut F. Sparadrap.

Cerats and Sparadraps are made for the same use as Emplasters, viz. to calefie, humect, astringe, &c.

Of the Oyntments the Chyrurgion is alwayes to have in readines in his *Salvatory*, we have spoken before; Now we come to treat of those he is to have alwayes in his Closet ready prepar'd.

Unguentum Populeon,

Serveth well to assuage the pains of the Scurvy, by anointing the parts grieved therewith; it assuageth pain in any part of the body, and it easeth the dolor of a caustick medicine, by being applied cold upon a pleget to the place grieved: it procures sleep in Fevers, if you anoint the temples, Calms of the hands, wrists, and soles of the feet

C 3

there-

therewith: it is cold and moist, and is made as followeth:

Rx. Fresh Buds of black Poplars lb iſs. Violes leaves, and of Wall Navelwort an. ʒ iii. Hog Grease unsalted, and clean from skins, and washt lb ii. These being all bruised, mixt and macerated together against May, add the tender tops of brambles, the leaves of black Poppy, Mandrake, or the leaves and berries of Mountain Elder, Henbane, Night-shade, Letice, greater and lesser Houseleek, the greater Burdock an. ʒ iii. being all bruised and mixt, and pouring lb i. Rose-water upon them ten dayes after, boil them with a gentle fire, continually stirring them with a Spathula, till all the superfluous humidity is wasted, then press them, and strain them, & Ung. s. a.

Unguentum Dialthæa,

IS good against all pains of the breast, of cold cause, and against the Plurisie; warmeth, mollifieth, and comforteth all parts of the body which are evil disposed through cold infirmities; it is good against stiffness, and pains in the joints in the Scurvy; it is good for cut nerves, pains in the sides, and hardness of the sinews, and is resolutiv and is thus made:

Rx. Fr

*Rx. Fresh Roots of Marshmallows washed and
bruised lb ii. Seeds of Linne, and Fennugreek,
an. lb i. macerate them three dayes in 8 l.
of water ; then boil them gently, and expresse the
Mucilage, of which take lb ii. common oil lb iii.
Boil them together, till the watry part of the Mu-
cilage be wasted, then add yellow Wax lb i. Rosin
lb β. Turpentine ℥ ii. boil them to the consist-
ence of an Unguent.*

Unguentum Martiatum,

IS good for many griefs : for it discusseth
cold causes in the head, sinews and joints;
it removeth pain from the breast and stomach,
proceeding from cold ; it prevaileth against
convulsions ; it helpeth the resolution of the
sinews, dead palsey, and the hip-gout, the
gout in the hands or feet, and other joints of
the body ; it mollifieth hard pustles and tu-
mors in the flesh ; it assuageth the hard swell-
ings of the liver and spleen, easeth the pain
in the small guts, and cureth the ach in the
reins, and is chiefly used in dropfies, and af-
fects of the spleen : and is thus made :

*Rx. Bay leaves fresh lb iii. Garden Rue lb i β.
Majoran. lb ii. Menth. lb i. Salvia, Absinth.
Balsamite, Basil, an. lb β. Ol. Olivar. lb xx.
Yellow Wax lb iii. Malago Wine lb ii shred*

32 *V A D E M E C U M*: Or,
your herbs, and infuse them seven dayes in the
Oil and Wine; the eighth day, boil them to the
consumption of the Wine; cool them, and strain
it, then dissolve your wax over the fire; & F.
Ung. s. a.

Unguentum Neapolitanum,

IS used for the Cure of the *Lues Venerea*.
the manner you shall have in the Treatise
of the disease of Itch, Scabs, and Leprosie,
and is thus made:

Rx. Hogs Grease wash'd with juice of Sage
℥i. Quicksilver strain'd through leather ℥iii.
Oil of Bayes, Chaucomil, Worms, an. ℥i.
Spike ℥i℥. Brandy ℥i. yellow Wax ℥ii. Tere-
binth wash'd in Succo Emulæ ℥iii. Powders of
ground Ivy, Sage an. ℥ii. warm the Grease
with the juice of Sage, till the juice be dissipa-
ted, mixing therewith the Oils of Camomil,
Worms, Spike and Wax; stir them with a
Spatbula till the Wax be well mixt, then taking
them from the fire, add the Ol. Laurin. In
the mean time let the Mercury extinc'd with part
of the Grease and Terebinth, be accurately stir'd
in a Mortar; after mix all together by moving
them well, then add the Powders and Brandy,
and stirring much again. F. Ung. ex arte.

Unguentum

Unguentum Rosatum,

IS good to allay the heat of Phlegmons, and Erysipela's, Excoriations, easeth hot pains of the head, from heat of the stomach and liver; and is thus made:

Rx. Fresh Porks Grease well wash'd, fresh red Rose leaves an. lb i. let them be macerated seven dayes, then boil them over a gentle fire, and strain them then with the like mixture of fresh Roses bruised, let them be macerated as many dayes, then boil them and strain them as before: at length pour on ℥ vi. of the juice of red Roses, oil of sweet Almonds ℥ ii. boil them with a mild fire, to the absumption of the juice, strain it, and make an Unguent f. a.

Unguentum Tutie,

IS a good dryer, and is used in distillations of the eyes, and is astringent, cooling, stopping, and filling up; it is thus made:

Rx. Tutty stone prepared ℥ ii. Calaminaris stone often burned, and quenched in plantain water ℥ i. and with Ung. Rosat. lb i℔. F. Ung. f. a.

Unguentum Splenicum,

IS used in affects of the Spleen, and very necessary to be in readiness, and is made as followeth :

Rx. Oil of Capers ζi . Oil of Lillies and Camomile, fresh Butter, juice of Briony, and Sow-bread, of each half an ounce. Boil them to the consumption of the juices, and then add the things following : Ammoniacum dissolved in Vineger, two drachms and an half. Hens fat, Marrow of Calves legs, Oesypus, of each half an ounce. The powder of the bark and roots of Tamarisk and Capers, of the roots of Fern Ceterach, of each one drachm ; of the seeds of Agnus Castus, and Broom powder'd, of each one scruple; Wax as much as will serve to make them up into an Unguent.

Unguentum Nutritum, or Tripharmacum,

IS used in curing *Ersipelas*, excoriations or bladders of the skin, and such as are called the shingles. It is good to take out the fire in burnings and scaldings, and it hindereth the falling down of any moist humor to ulcers in any part of the body, being spread upon cap-paper thin, and laid over the whole distem

distempered part ; also against any slight scab-
biness, or itching humor, whencesoever it is.
I do often mix it with other Unguents in cu-
ring Ulcers ; the Composition is as follow-
eth :

*R. Litharge of gold, searced very fine, ℥ss.
Oil of Roses ℥i. Wine-vinegar, ℥iv. put the
Litharge into a mortar, pour into it now a little
Oil, then a little vinegar, working them up and
down very well, until the Litharge hath drunk up
all the liquor, and come to the consistence of an
ointment, and white.*

These are Unguents very necessary for a
Chyrurgion to have continually in store ; for
with these he may be able , through his own
practice, to dress any wound, tumor , ulcer,
fracture, or dislocation, if he be ingenious,
from the first to the last. Next we will look
what Oils are fitting to be had, and those I
conceive may be such as follow : But first to
premise something of Oils in general.

Of Oils in general.

ALL sublunary things living are governed by a certain natural heat, and radical moisture, familiar to, and proper for them, which is aerous, fat, and substantial, which may either naturally or artificially be separated from its matter, whether it be Plant, Mineral, Animal, or its Excrement; according as each partakes thereof, more or less. And this is apparent to the eye, for there is scarce found any body, which cast into the fire, will not produce some flame, a certain sign of an aerous, fat and substantial humor, which being separated from its matter, we call *Oil*. So that from hence we may see, that all Oils are Natural or Artificial.

Natural is made by the heat of the Sun, drawing from within outwards; or by that which is included in the bowels of the earth. For an Example of the Sun, *Elæomeli*, according to *Dioscorides*, comes out of the branches of certain Trees, which grow in the Territory of *Palmyre*, a City in *Syria*. *Balsameleum* or *Opobalsamum* comes from other Trees, which grow in *Judea*, and now in *Egypt*, and *Grand Cairo*.

For an Example of Oils which come naturally from heat enclos'd in the bowels of the

the Earth, I shall mention *Ol. Petroleum*, which comes naturally from certain Rocks in *Italy*, whence it takes its name; of these I shall not make any longer discourse, but of those only which are prepar'd by the Art of the Apothecary, the Physician ordering.

Artificial Oils are either simple or mixt: the first is made by expression, or distillation; by express juice of fruits, berries, oleaginous seeds, which are bruised and pressed till Oil flows from them, and so are made Oil of Nuts, Olives, Almonds, &c. By distillation Oil is drawn, by the heat of the fire, from Woods, Roots, Gums, Rosins, Seeds dried, as Juniper, Tartar, Tyles, &c. The Compound is made of simple Oil, wherein herbs and other things are infused, or boil'd, till the virtue of the Simples are almost exhausted, then 'tis to be press'd and kept for use. To refrigerate, we use Oil made of unripe Olives, before they begin to change their colour, call'd by the Greeks and Latines *Omphacinum*, and *Omotribes*, i. e. crude and astringent, but to calesie, *commune Ol. i.* made of ripe Olives, press'd the stones taken away; to *ss i.* of Oil, take *ss iii.* of Herbs, &c. Flowers are to be insolated, for they will not bear coction. If you boil your Oil, you must add the fourth part of some proper juice of Wine or Brandy, and the Liquor must be all washed,

ed, and then a drop thrown into the Fire, will flame without noise, when 'tis almost cold press it.

A Compound Distillation is called *Balsamum*, because 'tis supposed to supply the virtues of the natural. Now natural *Balsam* penetrates, dries, and preserves Bodies from putrefaction, therefore we choose Simples that resist Poison for the composition of the artificial, as Myrrhe, Aloe, Thus, wherewith the *Egyptians* did formerly keep dead Bodies: to which add Mel, Terebinth, Gum of Ivy, Brandy, *Galbanum*, *Styrax*, Lig. Aloes, *Galanga*, Nutmeg, Cloves, Mace, &c. first comes out a water which drunk is very good for cold diseases, then a yellowish Oil, which wonderfully penetrates, chiefly proper for cold diseases of the nerves; lastly, a very red thick Oil more effectual.

Of Oils in particular, and first of Oil of Roses

IS anodine, and doth refrigerate and corroborate, and therefore is good against hot Diseases, as *Erysipelas*, &c. and is thus made:

Rx. Oil of unripe Olives wash'd, lb i. in the which you shall infuse ℥ iv. of unripe red Roses stamped in a wooden Mortar, and in a glass

Vessel, and set them a week in the Sun, shaking them; then boil them a little in Balneo, and strain them, and add as many more Roses, as you did the former, shaking them every day; do thus three several times, and then set them up so, or strain them out, which you will. This is called *Ol. Rosatum Omphacinum*.

Now there is another made of ripe red Roses, and ripe sweet Oil, often wash'd, after the same manner, only the third insolation must be continued forty days, that done, keep the Oil with the Roses without expression; and this is called *Ol. Rosaceum completum*.

Oil of Dill,

IS anodine and comforting, it concocteth crude tumors, causeth sleep, mitigateth the head-ach, refresheth the wearied members, strengthneth the sinews, discusseth wind, is profitable for convulsions, and assuageth aches, easeth pains, and hath many other good uses; and is thus made:

Rx. Oil of Olive, complete lb i. Flowers and Leaves of Dill ℥ iv. make three several infusions, as you did your Roses; to the last infusion, you must put ℥ iv. of the juice of Dill, and boil the Oil gently, until the juice be consumed.

Oil

Oil of Camomile,

Resolveth moderately, and calefieth; is good for the Colick, Stone, Weariness, and for Aches, Fevers; is also very convenient in Clysters, for all gripings and tortions of the guts, and yieldeth great comfort to the intrails, by the good odor and warmth thereof. It is made by infusion forty dayes, with the Flowers and Oil Olive complete, in Oil of Roses.

Oil of Worms,

Helpeth the aches of the joints in any part of the body and doth strengthen and comfort well the sinews weakned and pained; and is good against convulsions, and cramps; and is also a good balm for wounded sinews; and is made as followeth:

℞. Earth-worms lbss. in water often changed, then wash them well in White-wine, in which let them be macerated the space of an hour; then casting away the Wine, put the Worms into a white double Vessel, pouring upon them lb ii. of Olive, White-wine lb ss. Boil them in a glass Vessel, until the Wine be consumed, then strain through a hempen cloth, and put it up.

Oil of Lillies,

A Ssuageth pain, mollifieth hard tumors, doth much mitigate the violence of diseases, and is very effectual against pains of the breast and stomach, and allayeth all the inordinateness of the reins and bladder, and is good, with other unctious things, to anoint the lower parts of Women in Travail; it is made as Oil of Roses,

Oleum Excestrense,

May serve in lieu of all hot Oils, and is good to anoint the Limbs of such as are lame, by reason of some cold, bruise, sprain, &c. and is thus made:

Rx. These herbs, viz. Wormwood, Centaury, Mandlin, Fenel, Hyssop, Bayes, Majoran, Balm, Pennyroyal, Sabin, Sage, Thyme, an. ʒ iv. Southern-wood, Betony, Ground Ivy, Lavender, an. ʒ vi. Rorismar. lb i. Flor. Chamomel, Broom, Lillies, Elder, Cumin, and Fenel-seed, black and white Ellebor roots, the bark of Ash and Limons Oil an. ʒ iv. Euphorb. Mustard-seed, Castor, Pelletory, an. ʒ i. Oil lb xvi. Wine lb iii. the Herbs, Flowers, Seeds, and Euphorb. being bruised, the Roots, Barks and Castor cut small, and

and macerated a whole day in a warm Bath, small
 the Wine and Oil, and then boil'd over a gentle boil k
 Fire, till the Wine and moisture be wasted, stra
 the Oil, and keep it for use.

Oil of Violets

Cools, is anodine, &c. is made as Oil ed, f
 Roses Omphacine, Oil j

Oleum Nymphaeæ

Cools more than Violets, provokes sleep Oil o
 tempers the heat of the Reins and b
 Liver, helps the pain of the head. T

Note that Oils are easily incensed, so that f
 you use cooling ones, you must repeat the two
 often; if you wash them in Spring-water ven
 they will be the cooler. Poy

Oil of Fox,

IS good for pain in the joints, Gout, Sciatica, and cureth the ach of the kidneys Str
 and back; it is compounded after the gelic
 manner: Tra

Rx. The fattest Fox you can get, of a middle and
 age, and well hunted, and newly kill'd in Autumn, blef
 garbish him quickly, flay him, cut him lie:
sm

th, small pieces, and break all his bones well, then
gentl^y boil him in White-wine and Spring-water, an.
straiⁿ thvi. scumming it well with salt water \approx iii. the
tops of Dil, Thyme, Chamepityos, an. M. i. then
strain them hard, and boil the same with th iv. of
old Oil, flowers of Sage and Rosemary an. M. i.
when the wind and waterish moisture being wast-
ed, strain them hot with a Press; lastly, keep the
Oil separated from the aquosity for use.

Oil of Amber, is of so great virtue, that it hath
been called *Oleum Sacrum & Benedictum*;

IT's made by distillation, and is very good
for the pain of the head, resolution of the
sinews, and Falling-evil; if one drop or
two be taken with water of Betony or La-
vender, or in fair water, it preserveth from
Poyson; and mixed with Parsley-water, or
Malmesey, it is a singular remedy in discus-
sing diseases of the Reins and Bladder, bring-
ing forth the Stone, and opening the passage
of the Urine; it profiteth in the Colick and
Strangulion; four drops put into a little An-
gelica-water, and so given to a Woman in
Travail, refresheth all the weak faculties of
the body, confirmeth and openeth the brain;
and is extolled by *Crollius*, for the admi-
rablest medicine in the Apoplexy and Epilep-
sie: also for the Plague, if one drop be rub-
bed

bed on the nostrils morning and evening, it preserveth the party; to one infected, it is given in Carduus-water. In the Fit of any of the aforefaid diseases, it is good to anoint the nape of the neck back-bone, and nostrils, or to cast a drop or two upon the coals, and anoint the Patients head over them: If you anoint a few drops of it upon the breasts and nostrils of Women affected with the disease of the mother, it helpeth it, and keepeth it in his place; and this, the aforefaid Cakes will do being eaten: It is available in fainting, or the passion of the heart; in Agues three or four drops being taken in Carduus-water, at the coming of the Fit, and so sweat upon it, and the Ague will be gone: It is good to dry a catarrhous rheum: It cures the Tooth-ache proceeding from cold defluxions, if you mingle it with Plantain-water, and gargarize it. In the Yellow Jaundise, given with water of Endive, Cichory, or Selandine; in retention of Womens months, seven or eight drops in Balm-water helpeth; in vomiting of Blood three drops given in Colts-foot-water, Tormentil-water, or water of Sloes, it stayeth it. It cures the Vertigo in the head, the Megrims and Astonishness; taken in Fennel-water, it mendeth the sight, and it helpeth the stitch in the side, and is thus made:

*R. Yellow Ambar 1 part, powder of Flints
calcin'd, or powder of Tyles 2 parts, mix them,
and put them into a Retort, and distill them in
sand; keep the white Oil which exstills first
apart, continuing still the distillation, as long as
any Oil will drop, afterwards let both be recti-
fied apart, with a sufficient quantity of wa-
ter.*

Oil of Nutmegs,

DRunk with wine, driveth down womens
months, and also the quick and dead
fruit; the same it doth if it be given in a
spoon with a little sugar; being taken with
Wine, it takes away all pains of the head
coming of cold; it comforts the Maw, and
opens the Liver, Milt and Kidneys; it is ex-
cellent against beating of the heart, and faint-
ness and swooning, if ye drink thereof, and
anoint the region of the heart therewith; it
makes good blood, and expelleth flegmatick
and melancholick humors, and makes a man
merry; being used at Night, it takes away
all fancies and dreams: If any had a wound
or a broken rib by a fall or stroke, let him
drink this Oil with any wound-drink, and it
will help marvellously; it is good in all filthy
sores, and for all cold diseases of the joints
and

and sinews; it makes sweet breath; it helps the Spleen, if the left side be anointed; it helps all affects of the bladder, if it be drunk; and is thus made:

Rx. Nutmegs bruised lb v. Spring-mace lb L. macerate them the space of four and twenty hours, then distill them in a large Limbeck with a cooler.

Oil of St. Jobus Wort compounded.

IS an admirable balm for wounds, being used as hot as it can be endured, and the first dressing hotter: It is a sure medicine for all venomous wounds, all bitings of mad Dogs, or of venomous Worms, very hotly applied, and the parts about anointed therewith warm, and a good Cordial given inwardly. It is good in wounds either incised, or stabbed, and is indeed so excellent, that you need use no other Oil. It is a comfortable medicine against all pains, aches, and witherings of the outward Limbs, proceeding of cold causes, using it warm with good friction, and a plaster of Burgundy pitch spread on leather, and applied thereon, or rather the stiptick plaster of *Paracelsus*, or such like. The Composition is as followeth:

Rx. Str

Rx. Strong White-wine lb iii. seeds and flowers of St. Johns Wort four handfuls. Bruise them, and macerate them in a glass vessel well stopp'd for three dayes, then boil it in Balneo, and strain it hard, and put to the liquor more flowers and tops of St. Johns Wort, as you did before: do this three times, and then strain it, and put to the liquor for every pound, old Oil lb iv. Turpentine ℥ vi. Oil of Wormwood ℥ iii. Dittany, Gentian, Holy-thistle, Tormentil, of each ℥ ii. Ladies Thistle, sweet Calmus, of each ℥ ii. Worms often washed in White-wine ℥ ii. stop them close, and sun them forty dayes, then put them up.

Oil of Elders

LEnifies and purges the skin, is good for the obstructions of the Liver, helpful for the joints and nerves pained, the parts grieved being anointed therewith; given in Clysters, it provoketh stools, healeth the yellow jaundise, amendeth belly-ach, and easeth the pains thereof, and is made of Elder flowers and Oil olive, as in Oil of Roses.

Linseed Oil, or Oil of Flax-seed,

IS anodine, cureth Convulsions, mitigateth the hardness of the arteries, muscles, and nerves,

nerves, assuageth the pain of the piles or hemorrhoids, and helpeth the unnatural clefchaps and fissures of the fundament; it is used with good success to anoint the secret parts in child-birth, and in poultisses Womens fore breasts. It is made by expression, bruising your seeds, and putting them in *Balneo* four or five hours, and then strain them with a Scrue-press.

Oil of Whelps.

THIS Oil is of wonderful force to assuage pain, to bring shot-wounds to suppuration, and cause the falling away of the Eschar: it is thus made:

Rx. Oil Olive lb iv. Boil in it two Whelps newly whelped, until the flesh part from the bones; then put into them of Earth-worms prepared lb i. Boil them again, and strain them hard, and put to the Oil, Cypress, Turpentine ζ iii. Brandy ζ i. mingle them according to Art.

Oil of Bayes,

IS a medicine calefying, mollifying, opening, and discussing, and doth much mitigate the Colick, delivered into the body by Clyster. It is a present remedy against colic

griefs of the Brain, Nerves, Arteries, and Loins, the Parties anointed therewith. It is good for the Pallie, Sciatica, the hardnes and pains of the Spleen; and is much used, as well to cure the Scab and Ringworm, as the Scurvy. The best is brought to us from the *Fortunate Islands*.

Oil of sweet Almonds,

Doth lenifie the roughness of the Breast and Throat, as also the hardnes and driness of the joints. It is good against the Consumption of the Lungs. It is also of good use to be drunk in the Hectick Fevers. It stayeth the Cough, and assuageth the heat of Urine, healeth Ulcers by injection, is very good in *colica*, or *iliaca passio*, to be drunk and administred in Clysters, and is thus made:

*Rx. Sweet Almonds dry, and well rubbed,
℥s. Beat them well, and put them in a Press,
and press out the Oil without heat.*

Oil of bitter Almonds,

Doth open Obstructions, discusseth Wind and Vapors, but chiefly it healeth Deafness, the hissing and pain of the Ears, diminisheth the hardnes of the Sinews, and maketh

50 *V A D E M E C U M*: Or,
keth the Face and Hands fair, and is made
the Oil of sweet Almonds.

Oil of Vitriol,

Comforteth the Stomach after a wonder-
ful manner, and stirreth up the App-
tite. It defendeth the whole Body from
Apostemes and Inflammations, and therefore
it is used with good success in the Plurisie, and
also in vulnerary Drinks it is approved good.
It helpeth the infirmities of the Lights, taken
with the Water of Fennel or Fumitory.
It cutteth away the melancholy humors from
the Stomach, being taken with Balm-water.
It consumeth Phlegm, cures the Colick, and
the Loosness of the Belly. It quencherh
thirst in Fevers, cures the Hicock, and Load-
ing of Meat. It attenuateth the Blood, and
sendeth wounded parts grieved from fear
Gangrene, or putrefaction of the Blood.
It conglutinateth Ruptures as well of Bones
Reins, and doth exceedingly comfort and
roborate all the parts of Mans Body, and may
well be numbred as a principal amongst co-
dial Medicines. It is also a very good Me-
dicine, not only in preventing the Scurvy, taken
inwardly, but also in the Cure of the Scurvy
many ways; both inwardly taken with a
comfortable Wine, or with Beer for need, with

to make a Beverage therewith ; and daily to use it in small quantity , namely, four drops for a Dose. In the Calenture, it excelleth all other Medicines , taken in Plantan, Sorrel, or any other Water, or only in fair Water: It is good to rub foul black Teeth , to make them clean and white , but use it not often, for then it will consume them. In Ulcerations of the Mouth, Throat, or Uvula, that resist ordinary Medicines , touch the ulcerated part but once with this Oil , and the Ulcerations will heal very fast afterwards with any ordinary medicines and helps, remembering, as cause shall require, to use due Evacuations, or Phlebotomy. It is good in the Squinancy or Angina, used certain drops in a Gargarism or Lotion, namely, to make it somewhat sowre, and then gargarize warm therewith, for it mightily quencheth Inflammations, and tempereth well the Blood ; and being likewise a little thereof given to drink, namely, six drops, in such a case it is much the better, alwayes remembering that in all such Diseases there be Loosness of the Belly, and sometimes Phlebotomy. Moreover, in Ulcers and Fistula's, scarce a better medicine is found to inlarge a strict Orifice, to remove a callous, or to prepare any inveterate Ulcer to good healing, only by touching with Lint on the end of a Probe, thereby

D 2

putting

putting the Medicine to the place where the
 cause is. It is a good corrective in all purg-
 ing Medicines, and helpeth them to do their
 office; for it comforteth the whole Body, and
 giveth a grateful tast almost to any Medicine.
 It is also good to a weak Stomach oppress'd
 with phlegm or slime, and helpeth Appetite
 taken in Conserve of Roses. There is no
 Medicine more precious in pestilential Fe-
 vers. The true and utmost Dose cannot
 justly set down, but must be made by the
 putting in so much as may make the Vehicle
 or Medicine sharp or sowerish; for your Pa-
 tients they shall only be a little sharpned with
 certain drops thereof, only to alter a little
 taste; but in the Calenture, strong, or pesti-
 lential Fevers, a greater Dose may well be
 taken, according to discretion and judgment.
 But note this, That if you put any of it in
 any liquid Medicine, as Barly-water, Julwell
 or such like, which you intend to divide into
 several Doses, let the Glass be alwayes shaken
 well before you pour it out, else the Oil will
 lie at the bottom, and make the last Dose
 only too sharp to be taken, but also dan-
 gerous. The making of it is as followeth.

℞. Of Hungarian Copperas, or of the English Copperas, what you will. Melt it in a Skillet, then divide it into thick pieces, which

shall calcine upon the Coals till they look a little reddish, and then powder them, and sprinkle them with the best spirit of Wine, then put it into an earthen Retort that will endure the Fire, and keep your Fire by degrees to the height of heat for three dayes, or until the Receiver being before full of fumes, do become clear; let the distilled Liquor be rectified, and separate them one from another, that is to say, the spirit of Wine, the sharp spirit of Vitriol, and the strong heavy Oil.

Oil of Sulphur,

Is good to make the Teeth white, to take away the Morpew, cure Venereal Ulcers, expelleth diseases arising from wind or cold. It is good against the Falling-sickness, shortness of Breath, evil affections of the Lungs, easeth the Tooth-ach, and is (being well prepared) a true cordial Medicine. The manner of making it, is after this sort:

Rx. A bell of glass, holding at the least sixteen pounds; for the larger it is, the better; put it upon a great earthen Vessel containing about nine or ten Gallons, with three or four staves to rest the Bell upon; let your earthen Pot be so well nailed, that it will endure the fire, then put in your brimstone into the Pot, and set it on the fire, and when you see the Bell, casting in now and then

fresh brimstone as the first waſts; you ſhall have more ſtore of Oil, if you put your earthen veſſel into a furnace with fire under it, that the brimſtone may be alwayes melted. This muſt be done beſt in rainy weather, and in a Cellar; and before you kindle your brimſtone, you ſhall ſmoke your bell with ſage.

Oil of Turpentine,

IS taken inwardly, againſt the Stone, the Colick, cold and windy affections of the Breſt. It is outwardly uſed to heal ſinew wounded, or troubled with any intemperature; alſo to fill Ulcers with fleſh, and knit them up, having no cicatrize in them. It is made in this manner:

Rx. Venice Turpentine lb xxviii. Fair mace lb xcvi. put them into a copper veſſel with cover, and a cooler, and diſtill a thin white Oil. increaſe the fire, and you ſhall have it yellow. make your fire yet hotter, and it will come red. theſe three Liquors would be ſeparated by diſtillation again.

Oil of Spike,

DOth caleſie, attenuate, diſcuſs, and is very profitable to them that have the

Gout, proceeding of a cold cause, or to comfort any member benumbed : Also it is good against the Falling-sickness, and Convulsions, the Temples, and Nape of the Neck and Spine, yea, and the whole head to be anointed therewith. It is made as followeth :

Rx. Lavender spike ℥ iii. sweet oil ℔ i℔. wine and water, of each ℥ ii℔. boil them in a double vessel, stirring them often, to the consumption of the wine and water, and keep it for thy use.

Oil of Myrtles,

R Efrigerareth, astringeth, and comforteth, but properly the Heart, Stomach, Brain, and the Nerves. It is good in Fractures, for it cools, and resists putrefaction. It is made as followeth :

Rx. Myrtle berries bruised, and sprinkled with astringent wine ℔ i. juice of the leaves ℔ ℔. Oil of unripe olives ℔ iii. steep the berries in the Oil for the space of 24 dayes, then boil them, and strain them, and put in more berries : Do thus three times in a double vessel, after the third straining add the juice, and boil it to the consumption of that juice, and put it up.

Now for Balsams.

And first of Balsamum Vulnerarium,

WHich is also call'd *Mirabile*, by reason of its great and wonderful Virtues, and Cures it hath perform'd, when other means have been ineffectual. For it cures Wounds and Ulcers, and is good against the Palsie, and weakness of the Nerves, and pains in any part, from a cold cause, and is thus made:

Rx. Of the leaves and flowers, with the seeds of Tuisan, the tops of St. Johnswort an. M. ii. Ground Ivy, Sage an. M. ss. macerate them in a glas'd Vessel for two dayes; in lb ii. of the best White-wine, then add lb i ss. of old Oil, let them boil over a gentle fire till the Wine be wasted. Strain it, and put to it lb i. of Terebinth, Drage of Thus ʒ iv. Myrrhe ʒ iii. Mastich. Sanguin. Dracon. an. ʒ ii. Styrax. Calamit. ʒ i. beat them all over the fire, then put them in the Sun for seven dayes, and keep it for your use in a Glass, or earthen glas'd Vessel.

The famous Balsam of Guido is of the same

same virtue ; and Petrus Apponensis calls it,
Medicamentum omnium medicamentorum in
celeri cordis roboratione, & virium restauratione.
 'Tis thus made :

R. Choice Myrrhe, Aloes hepatic. Spice
 Nardi, Sang. Dracon. Thuris, Mumie, Opopo-
 naxis, Bdellis, Carpobalsam, Ammoniac. Sarco-
 colla, Croci, Mastich, Gum, Arab. Styrac. liquid.
 an. ζ ii. Ladani, Castorei, an. ζ iiss. Mosch. ζ ss.
 Terebinth the weight of all, being dried, powder
 them, macerate them in Wine, and strain them;
 then mix them all with Terebinth, put them into
 an Alembic, there will first come a thin Liquor,
 then a thick, red, yellowish, which is the best Bal-
 sam.

The Spanish Balsam, or Oleum Benedict.
 they say heals Wounds, even of the nervous
 parts, in 24 hours space, and is thus made :

R. Oldest Oil ζ iv. Flor. Hyperic. ζ ii. Tere-
 binth Cypriae ζ viii. pure wheat ζ iiss. Rad. Card.
 Benedict. Valerian. an. ζ i. Thuris pulverisat.
 ζ ii. the roots and herbs bruis'd, put them in a
 glas'd Vessel, and put upon them the best White-
 wine, as much as will cover them : let them infuse
 a day, then add your oil and wheat, boil them till
 the wine be wasted, then strain them hard, add the
 Terebinth and Thus, boil them again a little, and
 keep it in a Glass, or glas'd Vessel.

The way to use it is thus :

First wash the wound with white-wine cold then anoint the wound with this oil warm; if this cannot be done, inject it with a syringe, presently join the lips of the wound together by ligatures, suture, or glew, then anoint the neighbour parts with the said oil, but upon the lips of the wound being join'd, lay a cloth or lint moistned in the oil, and upon that another cloth dipt in black wine, above all a dry linnen cloth, then rowle it f. a.

Lucatulli's Balsam,

IS good for Wounds, being poured in hot In Bruises, Ulcers of the Reins, Stone in the Kidneys, or Bladder, with difficulty of making water, I use to give one drachm in Sack for Bruises, in White-wine for the Stone. It is made as followeth :

Rx. The best yellow wax lb i. melt it over a gentle fire in a like quantity of Canary; then add of the best Oil of Olives, Venice, Turpentine, washt white in Rose-water of each lb i. let them boill upon a gentle fire, till the wine be evaporated; then taking them from the fire, sprinkle in ʒ ii. of red sanders finely powdered; so stirring them continually till they be cool, your Balsam is artificially made.

Of Waters.

And first of Mint Water.

IT warmeth and strenghtneth the Stomach, Liver, Spleen, or Milt, helpeth Concoction, stayeth Vomit, is very cordial, and is distilled with Spear-mints, and White-wine, adding, if you please, a Clove or two, and a blade of Mace.

Water of Carduus Benedictus,

Easeth the pain of the Head, confirmeth the Memory, cureth the Quartan, provoketh Sweat, and comforteth the vital spirits, and is made by distillation.

Treacle Water,

IS good in the Plague, or pestilential Fever, the French disease. It killeth Worms, helpeth the trembling of heart, and is good to be mingled in Diaphoreticks. The manner of making it, is as followeth:

*Rx. The juice of green Walnut-shells ℥b iv.
juice*

60 *V A D E M E C U M*: Or,

juice of Rue lb iii. juice of Holy Thistle, Marigolds, Balm, of each lb ii. roots of Butter-burre lb is. roots of Bur-dock lb i. roots of Angelica and Masterwort, of each ʒ vi. leaves of Scordium four handfuls, old Venice Treacle, Mithridate, of each ʒ viii. good Canary-wine lb xii. of the sharpest White-wine vinegar lb vi. juice of Limons lb ii. Digest them two days in Horse-dung, or Balneo, in a Vessel well closed, then distill it in sand.

Water of Damask Roses,

DOth refrigerate, and comforteth the heart, is good against swooning, and causeth sleep.

Red-Rose Water,

DOth refrigerate, bind, and corroborate the vital and animal faculties, benefiteth the Head, easeth the pained Ears and Eyes, and doth good in Inflammations, and is profitable in Medicines against Dysentery.

White-Rose Water,

IS very good to put in Collyries for the Eyes.

Plantan Water,

IS astringent and sanative, good for them that are in a Consumption of the Lungs, in a dropsie, or that have the Bloody-flux; good also against the Quartan Ague. It cureth the Ulcers of the Reins, Bladder, and Excoriations of the passage of the Yard; and being drunk, helpeth against ardent Urine, or the sharpness of the water.

Balm Water,

HAt a great respect to the heart; a great cordial, and a good smell and taste. It is more proper to Women than Men; for it much respecteth the infirmities of the Mother, and is in the times of their pains very profitable to take a little of it, for the safer provoking of a speedy delivery. The way to distill it is thus:

Rx. Balm leaves dry lb ii. macerate them in six Gallons of Brandy for 24 hours, then distill them with an Alembic, adding to every pound of distilled liquor fine sugar ʒ ii.

Angelica.

Angelica Warer,

May serve instead of Treacle and Michridate, for a preservative against the Plague, or any infectious Air ; for there is no one thing more commended by ancient and modern Writers in that kind, than *Angelica* is, whereof there is good experience. It is also very stomachical and cordial ; and being truly made, will retain his strength and virtue Forty years and more ; is made as the former :

Wormwood Water.

THis Water is very grateful in the Stomach, for it is a Balsam thereunto ; it consumeth, and breaketh Wind mightily, and killeth Worms, hindreth Vomiting, provoketh Appetite is very good against pains in the Head, proceeding of a cold cause, and is very cordial. It is made as the former, adding of Anniseeds lbs.

Anniseed Water,

IS very excellent against wind in the Stomach, or elsewhere in the Body ; and against *Asthma*, Ptilick, and shortness of breath. It

It also breaketh Phlegm, and warmeth the Stomach; and is distilled from Anniseeds well macerated in Brandy, as the other.

Cinnamon Water,

DOth comfort and strengthen the Stomach, the Liver, the Milt, the Lungs, the Heart, the Brain, and the Sinews, sharpeneth the Sight, is good against Venom, as also the stings and bitings of venomous Beasts, helpeth a bad or evil savouring Breath, is good against loathing of the Stomach; and where you desire to warm, to open, to attenuate, digest or corroborate, in all such cases this precious Liquor excelleth, and is made as the former.

Doctor Stevens's Water,

IS a notable cordial Water, comforts the Head and Heart, yea, and all the principal faculties of the body, both animal, vital, and natural, if it be truly prepared. It helpeth all cold Diseases, Palsies, Convulsions, Barrenness, Tooth-ach. It killeth Worms, cureth the Dropfie, Stone, Stinking-breath and prolongeth life, and is made as followeth:

Rx. Cinnamon, Ginger, Galingal, Cloves, Nutmegs,

64 VADE MECUM: Or,

megs, Grains of Paradise, Anniseeds, Fennel seeds, Carroway seeds, of each 3 i. Thyme, Mother-thyme, Mints, Sage, Pennyroyal, Pellitory of the Wall, Rosemary, Red-Rose Leaves, Camomel, Origanum, of each one handful. Infuse them all 12 hours in 12 pounds of Gascoine Wine, then distill them in B. M. S. A. having this, you need not Aqua Coelestis Mirabilis, nor Imperial, or any such like, but this may be for all.

The common Lotion

IS used in Ulceration of the Mouth or Gums, in griefs of the Yard, as well within the passage, as also between *glans* and *preputium*. There are divers sorts according as occasion offers, but that which I mean here, is only made of Sage, Rosemary, Woodbine, and Bryers tops boiled in water, adding Honey, or Sugar, and Allom; or *Lapis Medicamentosus*, or *Sal. Prunel*. Put a Rag on your finger, or on a stick, and dip it into the Lotion warmed, and rub the Gums hard therewith, and the ulcerated parts, until they bleed.

Strong Lie,

IS Capital Lees, and is very necessary to mollifie the White-caustick when it grow-

groweth dry; as also if need be, by decoction, to make a *Lapis Infernalis* for to make Issues, or break Apostomes. The Liquid-castick is made of unslaked Lime, and Capital Lees, boiled together to the thickness of an Unguent, and applied as hereafter shall be shewn.

Vineger of Wine,

Helpeth the unnatural swellings of the Belly, and also cureth the fluxes of the Belly, and the Stomach, the parts grieved being fomented therewith. It stayeth the inordinate menstrual fluxes, the region of the Liver, or the beating parts fomented therewith warm, namely, with Stuphes wet therein. It is good against vomiting, the Stomach outwardly fomented with warm Stuphes wet therein. It also discusseth and dissipateth violent hot Tumors in their beginnings, yea, even those which are named *Panaritix*, or as some term them, Felons. It excelleth in Cataplasms, as also in Fomentations, provided the place be not excoriated *in hernia humorali*. In the falling down of the Fundament it is approved good, sometimes with Wine used warm to foment the part withall, as also to be cast on Bricks to receive the fume thereof. In the hot Gout, and in all Inflammations, as the
Rose,

66 VADE MECUM: Or,

Rose, or *Ignis Sacer*, or, as some call it, *St. Anthony's Fire*, it is a precious help also by way of Gargarism. It is an approved remedy against *Angina*, or any sudden inflammation of the *Columella*, or the *Amygdals* of the Throat; and if you mingle with it Oil of *Roses*, you make it the better for all the aforesaid uses.

Vineger of Roses,

IS very cordial, helps the Stomach, refresheth Nature weakned, and is good against the faintings, and great weakness of the Spirits: But if the Artift have no Vineger of *Roses* ready, he may mix with wine-vineger, a little *Rose-water*, and it will do almost as well. It is thus made:

Rx. *Red-rose buds* almost blown, being fresh, and the leaves clean picked from them that are withered and naught, gathered very dry, and then spread abroad in the shade to dry, about three or four dayes lb i. *Wine-vineger* twelve pounds. Set them in the Sun forty days, then strain the Vineger, and put it up; but if you will have it more strong of the *Roses*, then make a second infusion of fresh leaves.

Spirit of Wine or Brandy,

OF all Vegetables, is the most precious thing. It is the truest of all Cordials. It preserveth the Body from putrefaction, and in every cold oppression of Nature it is a true helper ; for the Cough, and all distillations of Rheums, and Fluxes, it is a perfect help. It comforteth the Stomach , and provoketh Appetite. It helpeth those which are thick of hearing, one drop daily put into the Ear. It preserveth a Man in health , if every Morning and Evening he take certain drops thereof ; and defendeth the Body that taketh it, from the oppression of infectious Air ; and (being sick) almost in any disease, it may safely be given as a true restorative Medicine. It is good in Wounds and Ulcers, of which in another place hereafter we will make mention ; is to be had at the shops.

Of Decoctions.

And first of the common Decoction for Clysters.

THE Artift is alwayes to have in a readiness the Simples for this, for 'tis oft-
nest

68 *V A D E M E C U M*: Or,
nest'used: of Clysters more hereafter. It is
thus made:

Rx. Mallows, Violets, Pellitory of the Wall,
Beets, Mercury, an. M. i. Flor. Chamom. Pug.
ii. Sem. Fan. ʒ ss. Lini ʒ ii. Boil them in q. s.
aq. commun. ad lb ii. in this you are to dissolve
your Eleſtuary, Oils, &c. as you will ſee.

Decoſtum Epithymi, is

A Sovereign remedy to purge Melancholy,
and Aduſt Choler, and is thus made:

Rx. Myrobal. Cheb. Indar. an. ʒ ss. Stechas,
Raiſins of the Sun ſtoned, Epithymi, Senna, an.
ʒ i. Fumiter. ʒ ss. Maudlin ʒ v. Polypody ʒ vi.
Turpeth. ʒ ss. Goats or Cow-whey lb iv. let them
all boil (except Epithym.) to lb ii. then add
Epithym. boiling them a walm or two, take it
from the fire, and add black Ellebor. ʒ i ss. Agaric
ʒ ss. ſal. gem. ʒ i ss. macerate them ten hours,
then preſs them hard, and ſtrain them. The
Dofe is about ʒ iv.

Decoſtum Peſtorale,

IS good againſt a Cough, Aſthma, &c. moſt
Diſeaſes of the Breſt, is thus made:

Rx Raiſins

It is *Rx. Raisins of the Sun stoned ʒ i. Sebesten,*
Fujubes, an. No. xv. Dates, No. 6. Figs,
No. viii. French-barly ʒ i. Liquirice ʒ ss. Mai-
den-hair, Hyssop, Scabious, Coltsfoot, an. M. i.
boil them in aq. font. ℥ iii. to the wasting of a
third.

Lac. Virginalis,

WAS invented to clear the Face of
 Sun-burning, Freckles, Pimples,
 &c. is thus made :

Rx. Roch Alum ʒ iv. boil'd in Aq. Font. ℥ ii.
ad tertias, then

Rx. Lytharg. auri. ℥ ss. best Wine-vineger
℥ i ss. boil them to ℥ i. mix both the waters to-
gether, and shake them till they look white.

Note. When at any time 'tis left to the dis-
cretion of him that makes the Decoction, or said
qs. it is understood by some as much water or other
liquor prescrib'd, as will be three or four fingers
breadth above the Ingredients to be boil'd.

Of Syrups in General.

THE Artift ought to be more dili-
 gent to labour in his Art, than to be
 curious

curious in searching out the Etymologies of words; but to satisfy him, *Syrupus*, quod dicitur *Syriae opus*, i. e. *Liquor of Syria*; it may be because the Physicians of that Countrey were the first Inventors of it: Or from *Syro*, *Trabum* and *opus* *Liquor*, because Syrups are composed either of juices, or decoctions of Roots, Herbs, Fruits, Seeds, and Flowers, which are strain'd hard with the Hand or Press. They are either altering, or purging; and first of the altering, and they are either simple or compound; the simple are made of equal parts, of the juice of any Herb and Sugar boil'd, according to Art: you may know when 'tis boil'd enough, by dropping some upon a cold stone, the virtue of the Syrup, being the same of the Herb 'tis made of.

Syrupus de Althea,

IS an opening slippery Syrup, good against the Stone, Gravel or Colick, and heat of Urine; you cannot well err in the Dose. 'Tis thus made:

Rx. Roots of Marshmallows \mathfrak{z} ii. Grass, Asparagus, Liquirice, Raisins stoned an. \mathfrak{z} ss. the tops of Marshmallows, Pellitory, Burnet, Plantain, Wall-rue, Maiden-hair, an. *M* is red Cicers \mathfrak{z} i. the four greater and lesser cold seeds, an.

\mathfrak{z} iii.

iii. infuse them in three quarts of fair water a day, then boil them till two remains, to which being dress'd and strain'd, add ℥ iiii. of white sugar, F. syr. in B. M. s. a.

Syrup of Clove-Gilliflowers,

Strengthneth the Heart, Liver, and Stomach, therefore put into most Cordials, and is thus made :

Rx. Take Clove-Gilliflowers clean'd from the stalks, pour on them a quart of Spring-water, and let them infuse all night ; then with ℥ iv. of white sugar dissolv'd in the straining of the infusion in B. M. make your Syrup without boiling it.

Syrup of Citrons,

Is good in Fevers pestilential, and others, quencheth thirst, &c.

Syrup of Limons,

Refrigerates and penetrates more than the other, good against Worms, corrects Putrefaction and Crudities.

Syrup of Verjuice,

Stayes Vomiting and Fluxes, good in bilious Fevers, &c.

Syrup of Wood-serrel,

IS good in pestilential and other Fevers &c.

Syrup of Quincies,

Stayes Vomits and Fluxes, spitting blood, dcfluxions from the head upon the breast. They are all made after this manner :

Rx. Of the juice of any of them strain'd, and depurated, by setting lb i the whitest sugar clarified and boil'd to the consistence of a Table lb ii. boil them a walm or two, and F. s. a.

Syrup of Red Poppies,

IS good in Surfets, Fevers, &c. Dose to 3 it is thus made :

Rx. Of the fresh flowers of red Poppies

pour lb iv. of warm water upon them, the next day press them, and make a new infusion, strain them, and boil it in B. M. to a Syrup, with equal weight of sugar.

Syrup of the Flowers of Water Lillies comp.

A Llayeth heat in any part, and in Fevers, and causeth sleep.

Rx. Fresh flowers of the whitest water lillies lbss. Violets \bar{z} ii. Lettice M. ii. seeds of Lettice, Porcelan, Gource, an. \bar{z} ss. boil them in clear water lb iv, to the absumption of one; to the straining add red rose water lbss. white sugar boild and clarifi'd lb iv. F. syr. in B. M. if you add lbss. of the juice of Porcelane, it may serve in lieu of Syrup of Porcelane, for the same use.

Syrup of Myrtles,

I S astringent, good for spitting of blood, &c.

Rx. Myrtle berries \bar{z} iiss. red and white sanders, sumach, pomegranate flowers, kernels of berries, red roses an. \bar{z} i ss. services cut small lbss. bruise them, and boil them in clear water lb viii. to iv. strain them, and add of the juice of citrons

trons and pomegranates an. $\frac{3}{4}$ vi. casting in by degrees lb iv. of sugar, boil them to a Syrup, adding the juices towards the end.

Syrup of Roses solutive,

Loosens the Belly, purgeth Cholera &c.

℞. lb iv. of warm spring water, damask rose leaves, as many as the said water is capable to receive, infuse them the space of 12 hours, then strain them hard; in which being warm, make a new infusion of the same quantity of Roses: Do thus three or four times, augmenting always your quantity of Roses to that of the strained liquor; which done, of six parts of this liquor and four parts of sugar. F. Syr. in B. M. f. a.

Syrup of the juice of Roses, is

Prepar'd without maceration, of the juice of the Leaves of Damask Roses, with the same quantity of Sugar to the juice (which must be depurated) as above.

℞.
Syrup of white

Syrup of Wormwood Compound.

THis Syrup corroborates the Stomach, causeth an Appetite, discusseth Wind, openeth Veins, moves Urine, and killeth Worms: And is thus made:

℞. Common wormwood not too dry, ℥ss. red roses ʒ ii. indian spike ʒ iii. old rich white-wine, juice of quinces, of each ℥ iiss. macerate them in an earthen vessel a whole day, then boil them gently in B.M. strain them, and put to them ℥ ii. of sugar, and make a syrup. s. a.

Syrup of Limons, is

Cordial and refrigerating. It doth please and profit the Appetite, and comforteth all that are sick of the Pestilence, or continual and contagious Fevers, as also all Diseases on which exceeding great Heat attendeth. It cheareth up the heavy Heart, and dispelleth Sorrow therefrom, and against all obstructions of the Spleen it is a good help, and also well approved in the Cure of the Scurvy. It is made as followeth:

℞. Juice of limons strain'd and purified ℥ i. Symplice sugar clarified and boil'd to the consistence

76 *V A D E M E C U M*: Or,
of a Tablet lb ii. boil them with a soft fire to a
syrup.

Syrup of Poppies,

H Ath an astringent quality, procureth
Sleep, helpeth the Cough, hindereth
the humors which distill from the head into
the throat, causing a tickling, and is of pre-
cious use against the Palsie, if it be used in the
beginning thereof. It is made thus :

*Rx. The beads and seeds of white poppy and
black, of each ʒ vi. Venus hair ʒ xv. Lic-
rice ʒ v. Fijubes No. xxx. Lettuce seeds ʒ v.
seeds of mallows and quinces tyed up in a fine
rag, of each ʒ iß. boil them in eight pints
of water, s. a. and to every three pounds strained
put to clarified sugar lb ii. F. syrup. s. a.*

Syrup of Violets,

D Oth break the acrimony of Choler, tem-
pereth the heat of the Bowels, bring-
eth down the Belly by purging. It helpeth
the Diseases of the Throat, as hoarseness, and
the dry Cough, and is a chief aid to the curing
inflammations of the Breast. It helpeth the
Plurisie, and quencheth the thirst in Fevers
being put in cooling Juleps, and is cordial.
is thus made :

Rx. Vi

Rx. Violet flowers picked lb i. Spring water hot lb iiii. or a sufficient quantity; put them in a new earthen vessel glased, and close covered, and let them infuse 24 hours, then strain them hard, and in this liquor lb ii. dissolve in B. M. white sugar lb iv. take off the froth, and make a Syrup, without boiling s. a.

Oxymel simple, is

OF great use for the Cure of inflammations of the Lungs and Throat, helpeth expectoration and difficult Breathing, cureth and attenuateth thick and slimy humors, purgeth the intrails without trouble, and is good both in cold and hot affections; and is made as followeth:

Rx. Of the best aromatick boney dispumed lb ii. clear Spring water lb iiii. of the best vinegar lb i. boil the water and honey in a glased vessel, taking off the spume continually with a wooden spoon full of holes, then add the vinegar by degrees, boil them with a gentle fire, to the consistence of a liquid Syrup.

Oxymel compound, is

USed, when you find the other too weak; 'tis good in Asthma, Plurisie, deobstructs

structs the Liver, Reins, Spleen, provokes Urine and Sweat; and is thus made:

Rx. Root of fenncel, smalage, perceley, butchers-broom, sparagus, an. ʒ ii. the seeds of smalage, perceley, fennel, anise, an. ʒ i. macerate them all (the roots being first cleaned, and cut small, and the seeds bruised) in ℥ x. of clear water, wine vinegar ℥ i℥. the day after boil them in B. M. to the exhalation of the third part; the remainder being strain'd and clarifi'd, add ℥ iii. of honey, and so by gentle boiling and continual despumation, make a thin syrup *s. a.* dose ad ʒ ii.

Oxymel Scylliticum simplex,

Cuts viscous humors, helps sour belchings, is thus made:

Rx. Despumed honey ℥ iii. vinegar of squills ℥ ii. boil them *s. a.* as in other Oxymels.

Oxymel Scyllit. comp.

IS used when easier Medicines cannot expectorate, good against the Falling-sickness, Megrim, cleanseth the Stomach, and Women after lying in. Dose ad ʒ i. and is thus made:

Rx. *Origano*

R. Origan. Hyssop. Thim. Privet. the lesser Cardamom. Stechad. an. ʒv. boil them in ℥iii. of water to one, to the straining add honey ℥ii. mel passulat. ℥ß. juice of briony ʒv vinegar of squils ℥iß. boil them, and scum them.
s. a.

Diamoron, is

PROFITABLE in Gargarisms, against the eating Ulcers of the Mouth. It cutteth away Phlegm, and cleanseth the Mouth and Throat; and by reason of the pleasant taste thereof, it is the more comfortable to the diseased. It is thus made:

R. The juice of mulberries and bramble-berries, gather'd before they be ripe, and before sun-rise, and depurated by sitting of each ℥iß. honey strain'd and despum'd ℥ii. let them boil in B. M. to a just consytence.

Syrup of Sloes,

DOth refrigerate and comfort the Stomach, stoppeth Fluxes, healeth the excoriations of the Intrails, and is made with the pulp of Sloes and Sugar.

Honey of Roses,

STrengtheneth and cleanseth the Stomach, purgeth clammy humors, helpeth concoction with the temperate heat thereof, allayeth and stoppeth hot fluxes, the phlegmone of the mouth, gums and jaws. It is singular good with Oil of Roses for wounds in the head, and putting to them some *Aqua Vita*, makes them good to heal wounds in the joints, where the joint-water gleeteth out. It is thus made :

℞. Pure white honey dispensed ℥ x. fresh juice of red roses ℥ i. put them into a skillet, and when they begin to boil, throw into them of fresh red rose leaves picked ℥ iv. and boil them until the juice be wasted ; always stirring it, then strain it, and put it up in an earthen pot.

Next of Sapa or Rob.

THEY are made of certain Juices, as of Berberries, Quinces, Cherries, &c. The juice is to be boil'd over a gentle fire, always dispuming it to the consistence of Honey ; if you add Honey or Sugar, it will keep the longer ;

ger; they participate of the same virtue as the simple whereof they are made; to every lb i. of Juice, take half of Honey or Sugar.

Of Lohochs.

What the *Greeks* call'd *Eclegma*, and the *Latines* *Linċius*, the *Arabs* call'd *Lohoch*; 'tis used chiefly in affects of the Wind-pipe, Lungs and Breast. They were invented of the Ancients for divers intentions, to thicken or make thin humors, to deterge, sweeten, and correct the sharpness and driness of the Wind-pipe, &c. They are of a middle consistence, between a Syrup and an Electuary.

They must be of a glutinous quality, that they may not too fast slide into the Stomachs, make them astringent in spitting Blood.

They are made of Fruits, Seeds, Juices, Gums, Sugar, Sapa, Honey, Syrup, Decoction, of Figs, Barley, Mucilage, bruise them, pulp them through a Sieve, make them up with the aforesaid things; Conserves, Powders, are sometime added; the Powder of Linseed dried, easeth Childrens Cough given with Honey. A *Lohoch* is made of Butter, Terebinth, Sugar, for a Cough from a cold cause; they are taken with a liquirice stick.

E 5

Lohoch

Loboch of Coleworts, is

Proper for all affects of the Breast, &c. and is thus made :

Rx. Juice of red coleworts lb i. saffron 3 ii. white sugar, honey an. lbs. dissolve your saffron in some juice, and boil the rest with honey and sugar (adding towards the end the saffron diluted) to a fit consistence.

Loboch Sanans, is

Good for those that are hoarse by cold &c. is thus made :

Rx. Garden hyssop, calaminth, an. 3 lb. juniper berries, sebasten, stones taken out, an. xxx. raisins of the sun stoned, figs, dates, an. 3 ii. linseed and fenugreek an. 3 v. maiden-hair M. i. anise and fenel seed, orice roots cut small, liquorice bruised, cinamon, an. 3 lb. boil them all in clear water lb iv. to the waste of half; adding sugar penids lb ii. gum arabic, tragacanth dissolved in the said decoction, an. 3 iii. boil them to a syrup, then cut small and bruised pine kernels, 3 v. sweet almonds blanch'd, liquorice starch, an. 3 iii. oris roots, 3 ii. sprinkle these into the syrup being taken from the fire, and stirred till it begin to be white.

Loboch

Loboch Scyllitic. is

More gentle than *Oxymel*, and is thus made:

Take \mathfrak{z} iii. of a *squil* bak'd in paste, or is root
 \mathfrak{z} ii. *hyssop*, *hoar-bound*, an. \mathfrak{z} i. *saffron*, *myrrh*,
an. \mathfrak{z} ss. *honey*, \mathfrak{z} ii ss. bruise the *scill* in a stone
mortar, and with the *honey* put them to the fire,
as soon as they are hot take them away, and
sprinkling in the other things powdered, and stir-
ring them with a quick motion. F. *Loboch*.
s. a.

Next of Preserves.

They are made of Roots, Stalks, Barks,
Flowers, Fruits, Pulps, thus.

Rx. *Eringo* roots q. v. clean them within and
without, taking away the pith, then macerate
them a day or two in clear water often changed,
then wipe them with a linnen cloth, then take
equal weight of white sugar, and as much rose
water as will dissolve the sugar, put them over
the fire, and scum them, when 'tis almost boil'd

84 *V A D E M E C U M*: Or,

to a Syrup, put in the roots, which are to be
boil'd till the humidity is almost wasted, and
the form of a Syrup.

Thus are preserv'd Roots of Angelica,
Borage, Bugloss, Cichory, Enul. Camp. great
Comfrey, &c.

The stalks of Artichokes, Angelica, Bur-
dock, Lettuce, &c. are preserv'd before they
be quite ripe, (contrary as in roots) taking
only the pith ; after the same manner.

Barks, as Orange Pills, &c. are preserv'd
by taking of the outward yellowness, and ma-
cerating them at least three days in Fountain
water, often changing it, then put them into
Sugar as before. *f. a.*

Preserve Flowers of Citrons, Orange, Bo-
rage, Primrose, &c. as before with Sugar.

For Fruits. *Rx.* Apricocks, pare them, and
take away the stones, and put them into equal
weight of sugar dissolv'd ; then four hours af-
ter take them out, and the sugar being boil'd
it ought, without any new liquor, put them in
again to boil together. *f. a.*

After this way, or little differing, are pre-
serv'd other Fruits, as Berberries, Cherries,
Citrons, Quinces, Peaches, Apples, five sorts
of Myrobalans, Nutmegs, Walnuts, Fil-
berds,

berds, Raisins, Grapes, Prunes, Sloes,
and *&c.*

Of any of the Fruits you may preserve
the Pulp, by boiling them in Fountain water
till they be tender, then pulp them through a
Sieve; boil the Pulp till the water be con-
sumed in a glas'd vessel, stirring it often, lest
it burn too, then to *℥vi.* of the Pulp, add
sugar *℥x.* and boil it to a fit consistence.

Flowers of Broom, Capers and Olives, are
preserv'd in Water and Salt, and Vineger;
lastly, Cinamon, Rose and Marygold Flow-
ers, Almonds, *&c.* likewise Seeds and Bran-
ches are said to be preserv'd, but with dif-
ference, that for the most part being dry, they
are incrusted with sugar, and are rather cal-
led Confections.

The virtue of Preserves participate of the
same with the Root, Stalk, *&c.* Preserv'd
Conservees are made of Herbs, as Worm-
wood, Sorrel, *&c.* Flowers, as Orange Roses,
Borage, and tops of Herbs, as *Cardus Bene-*
dicti. Fumiter, Balm, *&c.* Herbs and Flowers,
as Eye-bright and Roots, as *Enula* bruised,
&c. Fruits, as Sweet-bryer and Leaves of
Scurvygrass, Mints, Rue, *&c.* they are all
made of the triple quantity of Sugar, the
Herbs, *&c.* being first beaten pretty small in
a stone Mortar, then add the Sugar.

Note all are not to be mixt after the same
manner,

86 VADE MECUM: Or,

manner, for some must be first cut, bruised, and gently boild, some neither, some one way onely; wherein the Artift by this Caution, may shun erring.

Saccharum Tabellatum composit.

IS good to free the Stomach from Cholera and Phlegm, and for Worms, is thus made:

Rx. Rheubarb, ℥iv. troches of agaric, coral-lin, C. C. burnt, dictamay leaves, worm-seed, purcelan and sorrel-seed, an. ℥i. cinnamon, zedoary, cloves, saffron, an. ℥ss. white sugar finely beaten, ℥bi. dissolve the sugar in ℥iv. of wormwood-water, wormwood-wine, ℥i. cinnamon water a spoonful; with the aforesaid species make tablets. s. a.

Saccharum Rosatum Tabulatum,

STrengthens weak Stomachs, and comforts the Spirits, stays Vomiting, and pissing Blood; they are for consumptive People to carry in their Pockets, and now and then eat a little.

Next for Powders.

They are made of all dry things that may be powdred; they are either altering or purging, internal or external; the purging are made of Purgers and their Correctives with Sugar. Strengtheners of the Stomach, are made of Coriander, Anise, Fenel-seed, &c. with Sugar of Roses. Cordial ones are made of proper Powders, simple and compound, adding to ʒi. three or four of Sugar of Roses. They are made likewise for the Stone, to move courses, to bind; for obstructions of steel and openers, with equal weight of Sugar. Externally they are made to strengthen the head and other parts of Roots ʒii. Seeds ʒvi. Flowers ʒiii. Aromatics ʒii. Chyrurgical also, as Sarcotics, detergent, adstringent, whereof elsewhere.

Aromaticum Rosatum,

Strengthens the Stomach, stayes Vomiting, breaks Wind, helps Swooning, Palpitation, Convulsion, Epilepsie, &c. Dose to ʒii. is thus made:

Rx. Red

38 VADE MECUM: Or,

Rx. Red roses ʒ xv liquorice ʒ vii. wood
aloes, yellow sanders, an. ʒ iii. cinamon, ʒ
cloves, mace, an. ʒ iiss. gum, arabic, tragac
an. ʒ viii. nutmeg, cardamom the greater, g
langa, an. ʒ i spikenard, ambar-greese, an
ʒ ii. mosch. ʒ i. F. pulvis s. a. keep it in
glass.

Species Diaireos, is

Good against Coughs; you may make
up into an Electuary with Honey, or
some pectoral Syrup, and take it with a li
quirice stick. It may serve instead of Dia
calaminthes. It is thus made:

Rx. Orice root ʒ ʒ. sugar-candy, species
diatragacant. frigid, an. ʒ ii. F. pulv. s. a.

Pul. Diatragacanth. frigid. is

Good in Diseases of the Breast from
hot cause, or putrefaction in the parts
take it with Syrup of Violets, Dose ʒ i.

Rx. Gum. tragacanth. ʒ ii. arabic. ʒ x
starch, ʒ ʒ. liquirice, melon, and white poppy
seeds, an. ʒ iii. pompions, cucumers, gourges
an. ʒ ii. penids ʒ iii. flowers of water lilies
ʒ i. F. pul. s. a.

Pulvis

Pulvis Haly, is

Good in Inflammations of the Lungs,
Pthyick, Plurisie, &c. Dose to ʒi.

*Rx. White poppy-seed ʒ x. starch, gum, ara-
bic, traganth. an. ʒ iii. seeds of porcelan, al-
thea, mallows, an. ʒ v. cucumers, melons, gour-
ges, pompions, quinces, an. ʒ vii. rasp'd
ivory, liquirice, an. ʒ iii. white ambar ʒ ii.
penids, the weight of all. F. pulv. s. a.*

*Purging Powders, and first of Pulvis Sanctus,
or Diasenna,*

IT purgeth all humors from all parts, given
in White-wine alone, or with some
opening Syrup. Dose to ʒ iv.

*Rx. Senna, cream of tartar, an ʒ ii. cloves,
cinamom. galanga, ammeos, an. ʒ ii. diagry-
dii, ʒ ʒ. F. pulv. s. a.*

Pulvis Holland. or Pulvis Sennæ. comp. major,

IS of the same nature and dose with Pulv.
Diasenna; and is thus made :

*Rx. Aniseeds, caroway seeds, fenel seeds, cy-
min*

90 *V A D E M E C U M: Or,*
min seeds, spiknard, cinamon, galanga, an. ʒi.
liquirice, ground-sill, zalap. an. ʒi. crystal.
tartar. ʒii. dacrydium, ʒiʒ. fenna, the weight
of them all. F. pulvis.

The Earl of Warwick's Powder, is

OF such esteem by one, that he wrote
whole Book of it, and commends
in all diseases almost, where Purging is requi-
site.

Rx. Scammony prepar'd with the fume of sulphur,
ʒi. antimon. diaphoret. ʒʒ. chryst
tartar, ʒii. M. F. pulv. Dose ad ʒi.

Pulvis Arthriticus.

THis is a very safe and good general pur-
ging Medicine. It purgeth all po-
grical defluxions, and generally any humor
defluxion of the Body downwards, being
given in waters appropriate to the quantity
one drachm; and it is thus made:

Rx. Hermodactyls, turbith, diagridium, fenna
filings of mans skull, sugar, of each ʒi. pow-
dered; mingle them, and keep them close in
glass.

Of Eleētuaries, and first in general.

Electuaries are so call'd, because they contain choice Medicaments for inward use; they are either altering or purging, soft or solid; the soft are made of *Powders*, *Pulps* of *Fruits*, *Raisins*, *Thamarinds*, *Cassia*, *Manna*, with *Honey* a little boil'd, &c. The quantity of *Powders* is $\text{ʒ} \text{iii.}$ or $\text{ʒ} \text{iv.}$ to every $\text{lb} \text{i.}$ of *Honey*, without comprehending the *Cassia*, and other things; which you are to count rather in rank of *Honey*, or *Sugar*, than *Powders*: And here you must note, that the more your Electuary contains of *Powders*, and less of *Honey*, or *Sugar*, it is of so much greater force, but more ungrateful; but that which hath less, is of so much weaker force, and more pleasant to the palate. We shall treat first of the altering, because we must follow the law of methodical Curing, first to digest and alter the quality of peccant humors, before we purge them.

Now

Now in particular, and first of London
Treacle;

IT may be used well in place of Mith-
date and Treacle; but because the first
is the best, I hold it most convenient for
Artists to keep the species ready; and when
he hath occasion to use any of it, he may
to every ounce three ounces of Honey, and
warm it upon the Fire, stirring it well until
it be perfectly incorporated. It is thus
made:

Rx. Rasped harts-horn, ℥ ii. citron seeds, sorrel seeds, piony seeds, basil seeds, of each ℥ i. scordium, coralline, of each ℥ vi. roots of angelica, tormentill, piony, leaves of dittany, berries of juniper and bayes, of each ℥ ss. mace, golds, clove-gilly flowers, rosemary flowers, of St. Johns-wort, nutmegs, saffron, of each ℥ iii. roots of gentian, zedoary, ginger, myrrh, scabiose, devils-bit, holy-thistle, of each ℥ ii. cloves, opium, of each ℥ i. canary-mustard as much as shall suffice to incorporate them, beat them three times as much as the weight of all; mix them on the fire, as I shewed you before.

Theriaca Andromachi, or Venice Treacle.

MY ever honoured Master, Dr. Patin, in his Notes upon *Guibert's Treatise of the Pest*, sayes he could write a Volume of what might be objected against this and *Mithridate*, so much cryed up by Mountebanks and ignorant Empericks, there are so many absurdities and contradictions to be found in examining these Opiats; and that the *Treacle* in use at this day, retains only the name, and is altogether unlike that famous ancient Confection: And if any shall object, that *Treacle* was so much esteemed by *Galen*, that he wrote two Books of it, one to *Piso*, another to *Pamphilian*: 'Tis answer'd, they were none of *Galen's*; which may plainly appear from the stile and ratiocination, which are far different from his way and method: besides the unusual words, no where to be found in his Works, and the absurd and erroneous Opinions, which he abhor'd, as may be prov'd from the most learned *Mercurialis*, before him. And farther, If *Galen* did write those Treatises, one would use no other Argument to refute the use of *Treacle* made in our dayes, than the Conditions requir'd by the Author of those Books, to the legitimate Confecting of it. He
admits

admits of no *Succedanea's* ; whereas
 very many places , it cannot be prepar'd
 without at least twelve. He commands
 above all, that the best Cinnamon be procured,
 wherein he sayes very many Druggs
 are deceiv'd, which at this day is no where
 to be had. It may be further added, in the
 right dispensing of it, there must be no Error,
 nor not in the least Simple ; for a fault in
 one Ingredient, overthrowes the whole Composition.
 But I appeal to the judgment of
 expert Apothecaries, whether there be not
 above 20 egregious Errata's committed in
 the choice of the Simples, some being unknown
 to us, others not to be had, nor brought
 to us? No one almost but knows what
 abuse is committed in the choice of Vipers,
 and that they have not been in use for
 above these 500 years past, indeed not
 known, in whose stead are used most poisonous
 Serpents: And if such mistake in clearing
 a matter, what security in the true Balsam
 and Malabathrum, so precious, and fetched
 from remote Regions? At this day the
Egyptians put more trust in their Native
 Balsam, than in any other Remedy. And when
 good Authors have told wonders of its
 worth, at last conclude, But 'tis nowhere
 to be found.

Our *Myrrhe* also agrees in no way but
 scent,

cent, with that describ'd by *Dioscorides*. We want *liquid Ambar*, *Opobalsamum*, &c. or else they bring them to us sophistate, wanting the true marks laid down by *Dioscorides*, *Galen* and *Mesues*. For *Opobalsamum*, some use the liquor drawn from fresh *Myrrbe*, and call it *liquid Styra*. But 'tis thought the reason why we have not the true Balm, is, that the *Great Turk*, Lord of those Regions where it grows, and that but in small quantities, keeps it for himself, and to present it to other Kings his Friends and Allies; and permits it not to be sold at any rate whatsoever.

No true *Costus*, *Schenanth*, the genuin *Diptary* of *Crete*, *Ammomum*, *Calcitis*, *Terra Lemnia*, *Carpobalsamum*, Wine of *Falernum*. Our *Opium*, as *Mathiolus* witnesses, is not legitimate, and is wholly different from that describ'd by *Dioscorides*, although it be absolutely necessary, since 'tis the Basis of *Treacle*.

I abstain from citing Classic Authors, by whom 'tis disapprov'd, for 'twould be too tedious. *Pliny* inveighs against *Treacle*, as a bad Medicament. The Moderns condemn it as a confused heap of Simples, without order and method, of which the greatest part is unknown, the other frustraneous, and altogether unfit for the cure of malignant diseases.

And

And to conclude, this great Phyfician tell us, That *Treacle* is now made a pernicious Remedy, badly prepar'd, very hot, and will easily kindle a Fever in Bodies fubject to it. And which is worfe, by its inimicous and eftuouſ faculty, is very apt to produce deadly burning in the intrals; unworthy to be placed amongſt Antidotes, becauſe it is indued with no virtue, whereby it may prevent or help peſtilential Diſeaſes, as being a meanſ of compoſition of Luxury.

The ſame may be ſaid of *Mithridate* in uſe at this day, which cometh neareſt to *Treacle* in its faculties, as being compos'd of moſt of the ſame Simples, *Herbarum deformis chaos rudis indigeſtaque moles multorum ſimplicium* being, by reaſon of their too fiery nature, acrimony and malignity, averſe to our natural heat.

Moreover, the Receipt of *Mithridate* found by *Pompey* in his Desk, after his death, was made of ſo few and thoſe common things, that he made but very ſmall account of it, and laugh'd at it.

*Antidotus vero multis Mithridatica fertur
Conſociata modis, ſed magnus ſcrinia Regis
Cum raperet victor, vilem deprendit in illis
Syntheſin, & vulgata ſatis medicamina riſit
Bis denum Rutæ folium, ſalis & breve granum*
Jugla

*Juglandesque duas totidem cum corpore fivus :
Hec oriente die parco conspersa Lyæo
Sumebat metuens, dederat quæ pocula tutor.*

So that by these Verses it appears, that it was compos'd of only two dry'd Walnuts, so many Figs, twenty Leafs of Rue, with a few grains of Salt, which he took fasting against Poyson; but this may serve for three or four Doses. Now if any dislike this simple Antidote, let him use this following *Opiat*.

Rx. Of the conserves of bugloss, borage, water lilies and roses, an. ʒ ii. the conserve of marygold flowers, ʒ x. make an Opiatum with Syrup of limons; Dose, the quantity of a Nutmeg fasting, drinking a little White-wine after.

This is a most temperate *Opiat*, causing no heat, or unnatural or undue ebullition of the Blood. But the Learned Dr. Primrose, though he cannot commend this or *Treacle*, may be for the same Reasons that Dr. Patin disallow'd them before, yet he would have both kept in shops, or onely *Treacle*, for reverence to Antiquity. For besides many things that we want, as in *Mithridate*, so there are many things not well prepar'd, as *Trochisc. de Viperis, Scyllitic.* many are needless, as *Calci-*
F
quantity,

quantity, for what evil can there be in the 16
part of a grain to 3 i. of *Treacle*, which is a
common Dose? And why should not the de-
coction of the Squils suffice to mix with the
rest, unless you will keep them longer, and
then let them be kept condited with wheat
flower and sugar: Then the Vipers, they are
made into Troches with wheat-flower, but
'tis to be fear'd all their virtue goes away in
boiling; so they had better be calcin'd: of
their flesh, the fat and gall, heads and tails are
made Mummy; cut small and wash'd in Brandy
mix'd with Aloes, Myrrhe, and *Jewell*
Bitumen, and other Dryers, the Spine calcin'd
may be made those Troches.

But then if such Medicines must be re-
tain'd, if I might be worthy to advise my
Countrey-men, I would have them to make
use of that well-contriv'd *Treacle* of the
Learned Colledge of Physicians of London
than which I know not a better, and that
may serve in lieu of either *Treacle* or *Mithridate*,
as before; as likewise for the Electuary
of the Egg, which may very well be want-
ing, for several Reasons too long here to re-
cite.

As for *Confectio Alchermes*, 'tis true, 'tis
a pleasant one, yet the Pearls and Gold are
needless, as not being cordial at all; or
they were, there is no Analogy between
nature

natural heat and them, as to assimilate or overcome them.

The same may be said of *Confectio Hyacinthi*, and the rest of such stuff.

But methinks I hear some saying, If you deprive us of the use of these Medicines, &c. What will you substitute in their stead?

I answer Wine, either generous, or other, according to the temper of your Patient, *Cardiacum quippe Cardiacorum*; or you may put some Syrup of the juice of Citrons, or Limons, or *Melisophilli*, *Menthae*, *Caryophyllor. de pomis alterans*, *Julap Regium*, or *rosatum*, or *Julap. violar.* or the like, according as the nature of the Disease and Patient require; or boil'd with Mace, Cloves, Nutmeg, Rosemary, &c.

And *Galen* us'd Wine as the great Cordial against *Syncopes* and *Cardiagma's*, and continual Fevers, and not your cordial Powders, or Opiats, &c. which are very costly, tedious, and often inefficacious; but Wine with less cost, and more certainty and celerity performs its office, in both genuinely nourishing, and as the greatest Antidote resisting Poyson, far more infallibly than your fictitious, adulterate Bezoar, Corn. Unicorn. *Monocerot*, or whatsoever other *Quisquilie*, introduc'd erroneously into the practice of Physic, never used by *Hippocrates* or *Galen*, or any of the

ancient *Grecians*, that left us the true way of practising Physic for the good of Mankind; and not those *Arabians*, who were a sort of People very like your Quacking, Empirical Chymists at this day, in burthening the World with such an infinite number of naughty, superfluous, and some poysonous Medicines, when as those few used by the *Grecians*, were altogether safe and salutary; yet might the judicious profit by many of their writings, being first well grounded in the *Grecian* Doctrine, if their Books were genuinely Translated: But they are so badly done, that they are not to be trusted to by any of a mean capacity or judgment.

To conclude, the use of Wine is prodigious and admirable, if wisely prescrib'd, far beyond any Mithridate, or sort of Treacle, or such like trash, that go vulgarly under the name of Cordials, all which it as far exceeds,

Quantum lenta solent inter viburna Cupressi:

And are but despicable, in comparison of it the chief Cordial, as alone, having the true properties of a Cordial, viz. to nourish, callesie, humect, purge, and corroborate.

Lastly, the great *Plutarch* tells us, that the raging Pest in *Africa*, which did so depopulate

late *Julius Caesar's* Army, could no way be mitigated, but by administering generous Wine to the Soldiers, by which, as by a Divine power, it presently ceas'd. As for *Martial's*,

*Profecit poto Mithridates saepe veneno,
Toxica ne possint sava nocere sibi.*

'Twas by custom that it profited him; and there are a great number of Stories, of people that have eaten great Doses, without any hurt, of Hemlock, Ellebore, Spiders; which is the more to be wondered at, because these are most poysonous, so that some have dyed by drinking Wine only, wherein a Spider hath been by chance suffocated.

Serpents, whence some have been called *Ophiogenes*, as it were begot of Serpents, because they feed onely on them; which the Story of *Exagon* confirms, who, by the Command of a *Roman* Consul, being put in a Hoghead fill'd with Serpents, receiv'd no hurt, as *Pliny* witnesses, but came out as merry and blithe, as he went in.

Opium, of which one *Lysci* is reported to have eaten half an Ounce at one Dose, without any damage.

Julius Caesar Scaliger, that incomparable Philosopher, asserts that the *Turks* most frequently

quently eat *Opium*, whereby they are more courageous in the Wars both of *Mars* and *Venus*.

And the most learned Physician *Rexodem*, saw a Woman eat half an Ounce daily without any offence.

Anton. Musa Brassavolus, saw one swallow two drachms of Scammony, which only mov'd him four or five times.

And *Fallopins* knew a studious German, that devour'd an Ounce of Scammony, and was never mov'd: And thus you see that Objection answer'd.

Thus have I given thee the *Secretum Secretorum Secretissimum*, as to Cordials, which assure thy self if thou be ingenious, will serve thee to discover more vulgar Errors, in administering other Medicines: so that thou see'st for *Mithridate* and *Treacle*, you may better use *French* or *Spanish Wine*, *Diascordium*, or *Confect. Alchermes*; or if onely to provoke Sweat, as many use it, the learned *Wallens* tells you, that it is onely done by the virtue of *Opium*, for he tryed them both without *Opium*, and they would scarce cause sweat.

But if you will use *Treacle*, for all these Caveats, then you must be sure to have it from *Venice*, or *Montpelier*, which doth the effects of *Mithridate Damocratis*, and is good against the hoarsness of the Voice, against the

Jaundies, Dropſie, for wounds in the Intestines, to bring forth the young Birth dead, to expel and take away the Leprosie, and Measles, to revive every decayed Sense, to kill all kind of Worms, to dissipate wind, to comfort the heart and stomach, and to keep the body incorrupt and sound.

Theriaca Diatesſeron,

OR the poor Man's Treacle, is good against Poyſon drunken, and the bitings of venomous Beasts or Worms. It is also good against all the cold affects of the Brain, as Convulsions, Resolution of the Sinews, Falling-sickness, Cramp, Spasme, the inflation of the ventricle or stomach, against the defect of concoction therein, and against venomous wounds, both inwardly drunk, and outwardly applied. Also it openeth the obstructions of the Liver and Spleen, and thereby preserveth the Body from the Disease called the Scurvy. It procures Sweat very well, being taken in Sack, but is mighty hurtful to women with child, as may be easily known by the Ingredients, which are as follow :

R. Gentian, Bayberries, Myrrhe, Round Birthwort, of each ʒ ii. Husk your Berries, and powder and searce them; and your Gentian and

Aristolochy must be sliced and dried in a folded paper, and so powdered and searced, then dissolve your myrrhe in a little sack, and put to it of the best honey dispumed, ℥ ii. and then sprinkle in your powders, and incorporate them well on the fire; to which being added two ounces of rasp'd Ivory, 'tis then call'd Diapente.

Confection of Alkermes,

IS a preservative from Apoplexies arising from cold and melancholy humors, doth very much comfort the brain and heart, and is sometimes used very profitably for them that languish away by reason of long sickness, and are subject to swoonings. It is thus compounded:

Rx. The juice of Paremaines or Pippins, of the sweetest Rose-water, of each ℥ i℥. Syrup of the juice of Kermes ℥ ii. sugar ℥ i. boil them almost to the consistence of honey, then bring it from the fire, and yet warm, add Ambargrise cut small and dissolv'd in drops of Ol. Cinam q.s. ℥ ii. then cast in these following finely powdered, of the best Cinnamon, the wood of Aloes, an. 3 vi. leaf gold, 3 i. pure musk, ℥ ss. make it up according to Art.

Mithridate,

IS in quality and virtue like unto Treacle, but more hot and forcible against the poison of Serpents, mad Dogs, wild Beasts, creeping things. Being used as a Plaster, or drunk, it cureth all the cold affections of the Head, helpeth the melancholick, or those that are fearful of waters. Them also that have the Falling-sickness, Megrim, pain in the Bowels; Ears, Tooth-ach, and weeping Eyes; helpeth the evils of the Mouth and Jaws, being plaster-wise laid to the temples; by discussion giveth ease to the troubled with the Squinancy, Apoplexy, Cough, spitting of Blood, Imposthumes, or Inflammations of the Lungs, or any Grievs within the Body. And it is good against the Bloody Flux, Flux of the Stomach, obstructions of the Guts, and against wringing, and tortions in them. Being taken with *Aqua-vitæ*, and the decoction of Balaufrans, it remedieth Convulsions and Palsie; helpeth the Midriff, wind in the Hypochondria, the pains of the Reins and Bladder; breaketh the Stone, provoketh Urine, and monthly Flowers, expelleth other vices of the Matrix; yieldeth a singular benefit for the Gout; profiteth not a little in Quotidians and Quartans, a quantity drunk in Wine being

106 VADE MECUM: Or,
first warmed, and then taken an hour before
the Fit.

Diacydonium Simplex, is

Good against Vomitings and Fluxes, &c.
and is thus made :

Rx. Of Quinces cut small, and boil'd in
sweet water to a thickness, ℥viii. white sugar dis-
solv'd and boil'd to a just consistence ℥vi. boil
them to a thickness.

N. B. When you give Medicines to stay Vom-
iting, give them after Meals; when for Fluxes
before.

Elect. Lenitivum, is

Given in Fevers without hurt, Dose
℥ii.

Rx. Raisins stoned, fresh Polipody of the Oak
Sennæ, an. ℥ii. Herb Mercury, M. i℔. Injuba
Sebestens, an. No. xx. Maiden-hair, Violets
French Barley, an. M. i. Damask Prunes
Tamarinds, an. ℥vi. Liquirice ℥℔. Boil them
s. a. in five quarts of water, to the dissipation
the third part; then strain them hard, in part
which warm, dissolve Pulp of Cassia, Tamarinds

new Prunes, Sugar of Violets, an. ʒ vi. in the other part dissolve lb ii. of sugar: lastly, add Senna powdered ʒ iß. aniseedes powdered ʒ ii. to every pound of Elecuary, and so bring them to the form of an Elecuary s. a.

This may be in lieu of Diaprun. & Catholicon.

Elec. E Succo Rosar.

Purges Choler and Phlegm strongly, Dose to ʒ i.

Rx. Sugar, juice of red Roses depurated in the Sun, an. lb i. and ʒ iv. all the sanders, an. ʒ ß. Mastich, ʒ iii. Diagryd. ʒ xii. Camphor. ʒ i. let the sanders be rasp'd, and then accurately powdered, and sear'd, to them add Diagryd. powdered apart with a drop of Ol. Amygdal. dulc. then the Camphor likewise reduc'd to Powder, and Mastich finely powdered; lastly, with the juice of Roses boild with sugar to a Syrup, and warm, F. Elec. s. a.

Confectio Hamech,

Purgeth Choler, Melancholy, and salt Phlegm, and is therefore with great benefit used against Diseases arising from the same, the Cancer, Leprosie, or dry Scurf, Mad-
ness.

108 VADE MECUM: Or,
ness, Ring-worm, Itching, Scabs, and the likes
the Dose is six drachms in Fumitory-water;
Posset-drink, &c. it is thus made :

*Rx. Bark of yellow Myrobalans, ℥ ii. black
and chebul ones, violets, pulp of coloquintida
polypody of the oak, of each ℥ i℥ wormwood,
thyme, of each ℥℥. anniseeds, fennel-seeds, red-
rose leaves, of each ℥ iii. beat them, and steep
them in six pints of whey one day, then boil them
to three pints, and strain them, and to the liquor
add juyce of fumitory, pulp of prunes, and rais-
ins, of each ℔℥. white sugar, dispumed honey,
of each ℔ i. boil them to the thickness of honey;
when it is almost boiled enough, sprinkle into it
agarick trochiscat, senna powdered, of each ℥ ii.
rubarb powdered, ℥ i℥. epithymum, ℥ i. diagri-
dium, ℥ vi. cinnamon, ℥℥. ginger, ℥ ii. seed of
fumitory, and anise, spikenard, of each ℥ i. make
them into an Electuary, s. a.*

Diacatholicon,

GEntly purgeth all humors, it is conve-
niently used in Clysters, in Fevers, and
other Diseases, which arise from a certain evil
disposition of the Spleen and Liver; the
Dose is to ℥ i℥. the composition is as follow-
eth :

Rx. Pulp

Rx. Pulp of cassia, and tamarindes, leaves of senna, of each ℥ ii. polypody, violets, rubarb, an. ℥ i. anniseeds, penids, sugar candy, liquirice sliced, seeds of gource, pompions, cucumbers, melons, of each ℥ ii. beat those that are to be beaten, then take fresh polypody bruised, ℥ iii. fennel-seeds, ℥ vi. boil them in four pounds of fountain water, to the wasting of a third part, strain them, and put to the liquor 2 pounds of the best sugar, boil'd to the thicknes of a syrup, then to the pulps, dissolv'd in part of the decoction, pour on the syrup by degrees, then add the pouders, that it may be made an Electuary, *f. a.*

Of Diascordium.

IT is an Epitom of *Mithridate*, availeth in the Plague and pestilential Fevers, Fluxes of the Belly, Tertian and Quartan Agues, and other diseases, where *Theriaca*, and other great Antidotes may not be given, as is often to Children and Women with Children; 'tis given with water of wood-sorrel, or the like. *Eracastorius* the Author, gave it thus to those that were infected with the Pest.

Rx. Of the juice of wood-sorrel, ℥ ii. the juice of citrons or limons, ℥ i. diascordium, ℥ i. the cordial species with gems, ℥ ii. vinegar, ℥ i. mix them for one dose, to be repeated as occasion shall offer. In lieu of the cordial species, you may

may use *Alchermes*, without gold and pearls, as before. 'Tis thus made :

℞. *Cinamon*, *cassia lignea*, of each ℥ss. true *scordium*, ℥i. dittany of *Crete*, *tormentil*, *biston*, *galbanum*, *gum arabic*, of each ℥ss. *opium*, ℥i℥. *styrax calamint*, ℥iv℥. *sorrel seed*, ℥i℥. *gen-rian*, ℥ss. *bole armenic*, ℥i℥. sealed earth of *Lemnos*, ℥ss. long pepper, ginger, of each ℥ii. white dispumed honey, ℔i℥ss. sugar of roses, ℔i. good canary wine, ℔ss. dissolve the gums in the wine, and then mingle the rest according to Art, to the form of an *Electuary*.

Of Pills, and first in general.

P*ilula* is a diminutive of *Pila*, so call'd from its spherical and round figure; the *Greek* call them *catapotia*, from *catapino*, *devoro*, because they are swallow'd without chewing; this figure was invented by the *Ancients*, to accommodate and please the humors of *Patients*, that could not so well take *Potions*, or other liquid forms of *Medicines*, as solid *Pills*; and that they might draw from the furthest parts of the *Body*, all tough and viscous humors, by reason of their being not so soon dissolv'd as *Liquids*, and so stay longer in the *Body*.

Now

Now of Pills, some are Altering, Anodyne, Narcotic, Incrassating, and others Purging; the Base of the Purging is usually Aloes, adding, if you see cause, any other Purgers, with their Correctives, and such as promote the cathartic quality; to which may be added Gums, Lachryms, Juices, all dry things, which may be form'd into Pills with any convenient liquor, as Honey, Syrup, Mucilage; but if you add Gums, a thinner liquor will serve; the Gums and Lachryms being purged and depurated from their fæces, stir them in a warm Mortar and Pestle till they grow soft, put in their Powders by little and little, pouring on as much liquor as your mixture requires; then rub over the whole mass with oil of Sweet Almonds, and within a parchment or bladder oil'd likewise, keep it in a Pill Pot.

For Narcotics, your *Laudanum Londinens.* may very well serve for all, the which how to use you shall have directions.

For Purging, if you take them at night, let it be when you sup not, after your first sleep, or early in the morning, because else they draw naughty humors to the stomach, they corrupt the meat you have taken, pluck and gnaw the upper part of the stomach, and so many times provoke Vomit, as *Galen* notes *de sanitate tuenda.*

Those

Those that cannot well swallow them alone, may have them gilt, or may take them in some Posset-drink, Wine, Syrup, Broth, yelk of an Egg, pulp of an Apple, stew'd Prune, Raisin, not with their skins, which often hinder them from dissolving in the stomach.

Now in particular, as to Pills, and first of
Pilulæ Rudii,

Purgeth ill humors from all parts of the Body, quick in operation, Dose from \mathfrak{z} i. to \mathfrak{z} ii.

Rx. Colocynth, \mathfrak{z} vi. agaric, scammony, roots of black ellebor, turpet, of each \mathfrak{z} ss. aloes, soccorine, \mathfrak{z} i. cinamon, mace, cloves, of each \mathfrak{z} ii. let the colocinth. being clear from seeds, be cut small, the agaric be rasp'd, ellebor, turpet, and spices grossly beaten, and pouring on as much brandy as to be six fingers breadth above all; let them infuse by a gentle heat for four dayes, then strain'd and press'd hard, dissolve in the same the scammony and alaes; then put the liquor into a glass alembic, that the humidity being separated (by distillation) there may remain a thick matter of the consistence of honey, of which make a mass.

Aloe Rosata,

Purgeth the head and stomach very well, and killeth Worms, being made up into Pills, and so swallowed; the Dose is one drachm, it is thus made:

Rx. Aloes succotrine, of the clearest, made into powder, ℥iv. juice of damask roses purified, lbj. put them together to the sun, or in balneo, until all the moisture be exhale, then add more juice, and again evaporate it: thus do four times, and then put up the mass in a pot close covered.

Pilule cochiae minores,

Purge Choler and Phlegm from the Head, and all other parts, wherein such humors are contained. The Dose is to ℥i. They are made as followeth:

Rx. Lucid aloe, the purest scammony, pulp of colocynth. an. ℥i. powder them, and with a sufficient quantity, and equal parts of Syrup of wormwood, and buck thorn berries, make a mass, s. a. adding ℥ii. of oil of cloves; and thus ordered, they may be either taken alone, or with other Pills; and may serve you, if not better than Piluli ex Duobus.

Pilule

*Pilula sine quibus, or without which I
would not be.*

They wonderfully purge Choler, Phlegm
and Melancholy; they are most proper
good against the cataract and dimness of the
eyes, preserving the sight, and curing the griefs
of the ears; they also help the pains and gripings
of the upper guts. They are thus made:

*℞. Aloes dissolv'd in juice of roses, and of
dried ʒ xiv. prepar'd scammony ʒ vi. agaric
rhubarb, senna, of each ʒss. wormwood, red
leaves, violets, dodder, mastich, an. ʒ i. salt
wormwood, ʒss. let the scammony, aloes, agaric
and mastich be powdered apart, then add the
rest, and with syrup made of the juice of senna
with boney. F. massa s. a.*

Pilule de Succino,

ARe friendly to the Womb, and take away several causes of sterility, good against Catarrhs; *Crato* was the Inventer, but now alter'd for the better, by the Pen of the Learned Physician Sir George Ent, as follows:

Rx. White ambar, mastick, an. \mathfrak{z} ii. best aloes, agaric. troch. \mathfrak{z} iij. aristol. long. corn. ceri. an. \mathfrak{z} ss. nutmeg. \mathfrak{ss} cum syr. de absinth. F. Massa.

Pilula Tartarea seu Melanagoga Quercetani.

Purges both bile, thick, tartarous, salt, mucilaginous humors, from the farthest parts; good in quartane Fevers, Madness, Scabs, Venereal Diseases, Cancers, because they purge the Blood; they may be taken in morning, and after a light Supper. The Dose is to \mathfrak{z} ss. they are thus made:

Rx. Crystal of tartar, \mathfrak{z} iii. polypod. quer. \mathfrak{z} ii. blew currents, \mathfrak{z} ss. flowers of borage, bugloss, *lymphæ* an. pugil. i. boil them in a sufficient quantity of fumitory and scolopendr. till half be wasted.

Rx. Of

Rx. Of this decoction clarified lb ii. the juice of fragrant apples purified lb i. to which add senna, ℥ iii. turpeth, roots of black ellebor, ℥ i. choice myrrhe, ℥ i. mace, cloves, cinamon, epithym. an. ℥ ss. macerate them four dayes in a glass vessel in B. M. then strain them, in which dissolve ℥ iv. of prepared aloes, and reduce them to a due thicknes over a gentle fire; when 'tis most cold, add spec. latif. dialac. an. ℥ i. absinth. fraxini. an. ℥ ii. essentia croci. ℥ i. with a few drops of oil of anise. *F. Massa lularis.*

Pills of Ruffus,

ARe called pestilential, because they are usually given in the Pestilence, Plague, rather to prevent Infection, than cure the infected, the Body being free from Excrements by the Aloes, from putrefaction by the Myrrhe, and by Saffron the vital Faculties are quickned; they are very stomachical; and where any oppression of the stomach doth require gentle Purging, these Pills excel; the Dose is to ℥ ii. They are thus made:

Rx. Of the best aloes, ℥ ii. choice myrrhe, ℥ i. saffron, ℥ ss. make them up with the syrup of wormwood, *f. a.*

Pilula Aloephanginae,

MEsue sayes are of his invention, which he call'd so from the Arabick word *Aloephangia*, which signifies odoriferous, and aromatic, of which like they are compos'd. In truth 'tis a fine Pill, and purges the Brain, Stomach, and the sensitive organs from all thick putrid and pituitous humors, and dissipate the pains caus'd by them, fortifies the Stomach, and its coction. Dose to ʒ i. and is thus made :

Rx. Of cinnamon, cloves, the lesser cardamoms, nutmegs, mace, calamus aromaticus, carposulfamum, or juniper berries, schenanth, yellow Sanders, goat rue, red roses, an. ʒʒ. from these finely powdered, draw a tincture with brandy in glass vessel close shut, in lb iii. of the streining, macerate lb i. of pure aloes, to which add mastick and myrrhe powdered, an. ʒʒ. saffron, ʒ ii. balm of peru, ʒ i. at length the superfluous humidity, being absumed upon hot embers, reduce them into a mass.

Pilula Catholica, seu Imperiales Fernelii,

Purge gently all sorts of humors from the Viscera, and corroborate them, help con-

118 VADE MECUM: Or,

Concoction in all parts of the body, and
that respect deserve to be call'd Catholick
Dose to ʒ i. these and the other may be
taken alone, or mix'd with extract R
They are thus made :

Rx. Of aloes, ʒ ii. rhabarb, ʒ iſs. *agave*
senna, an. ʒ i. cinamon, ʒ iii. ginger, ʒ ii. *myrris*,
meg, cloves, spikenard, mastich, an. ʒ i. *many i*
syrup of violets, make them into a mass, *anoin*
your hand with oil of sweet almonds.

Pilulæ Stomachicæ cum Gummi,

Cleanse the inward parts of all offend
humors, strengthen the digestive
culty. Dose to ʒ i. you may take them
ly in the morning, and sleep after them;
you may mix them, and all the other with
tract Rudii, or Pil. Cochix. They are
made :

Rx. Of the purest aloes, ʒ i. senna, ʒ v. *g*
ammoniacum, dissolv'd in vinegar of elder, *ame*
mastich, myrrhe, of each ʒ iſs. saffron, salt
wormwood of each ʒ iſs. cum syrup, e rhamna
lutivo. F. massa. s. a.

Laudan

Laudanum Londinens.

Instead of that which is falsely ascrib'd to *Paracelsus*, set down by *Crollius*, and others, which was none of his, I have here inserted that of the *London Pharmacopoeia*, as being the safest and best prepar'd of any in the world, and without the stinking venomous juice of roots of *Henbane*.

R. Of *Thebiac Opium* extract'd in spirit of wine, \mathfrak{z} i. *saffron* extract'd the same way, \mathfrak{z} i \mathfrak{ss} . *Castor*, \mathfrak{z} i. mix them with the tincture of half an ounce of the species of *diambra* newly made alive in spirit of wine; then add *ambar-grise*, *mosch*, an gr. vi. oil of *nutmegs* six drops, then evaporating all over a gentle fire in *Balneo. M.* make a mass. *s. a.*

'Tis call'd *Laudanum, quasi Laudatissimum Remedium*. The Learned *Dr. Primrose* could find only the genuine description under the name of an *Anodyne*, which is this:

R. Of *opium*, \mathfrak{z} i. the juices of *apples*, *oranges*, *quinces*, an. \mathfrak{z} vi. *cinnamon*, *cloves*, an. \mathfrak{z} \mathfrak{ss} . digest them for a month in *horse-dung*, press and strain them, then add *mosch*, \mathfrak{ss} . *ambar grease*, \mathfrak{ss} . *saffron*, \mathfrak{z} \mathfrak{ss} . of the magistery of *pearls* and *cerals*,

120 VADE MECUM: Or,

corals, an. ʒss. digest them again a month; but the last are useles, saith this Learned Doctor else the description is good enough, but the doses are not good, for ʒi. of saffron is enough, and ʒss. of ambar; and to add Henbane, is not only unprofitable, but dangerous and hurtful.

Note. Never administer any Narcotics, before you have tryed Anodynes. In bilious Colicks you may mix Laudanum, with some gentle purging Syrup or Electuary, with Scammony or Colocynth, as Syrupus de Cichorio cum Rhabarbaro, Persicorum de pomis, simp. magistral. rosaceus solut. e succo rosar. & cum senna, elect. lenit. catholic. diaprun. &c. whereby you will, as they say, kill two Birds with one stone. i. e. remove both cause and pain: But then you must give less of the Laudanum, than the just dose, that it may not hinder the operation of the purgative.

In fine, according to the divers intentions these Narcotics are to be used, so you must give them at different times; i. e. you must give them at night, to cause sleep; in the morning, to appease pain, and stop immoderate evacuations, as the hemorrhagie, and hemorrhoids, &c. four hours before or after supper, to incrassate humors with fluxions when too thin. And now you may see that you need none of the Philoniums, or such like, for reasons before specified.

In all sharp pains whatsoever, hot, or cold, within, or without the body; yea even when through extremity of pain the Parties are at death's door, or almost mad with the vehemency of the same, this Medicine giveth ease presently, yea, and quiet sleep, and that safely, but much better the body being first soluble either by nature or art; I mean by a suppository, or clyster, which is better.

In the Colick with Mint-water, or rather Syrup of violets, it easeth the griping pains thereof.

In the pains and gravel of the Kidneys, it giveth present ease, and likewise in the Pleurisie.

In pains of the joints it is very good; as also to stay Rheums, Tooth-ache, and other like defluxions, in the beginnings, as namely, in the Tooth-ache, dissolve four grains thereof in Plantan-water, and put it into the Ear of the aking side, and take three grains into the body, and lie to rest.

It is a sure help in all fluxes of the belly, whether they proceed of sharp and slippery humors, or whatsoever else offending cause, taken with mastich, *terra sigillata*, fine bole, or with any other appropriate good Medicines, as old Conserve of Roses; it is exceeding sure, for it fortifieth the other Medicines, and doubleth their Forces, adding its own also.

Secreto.

In extreme watchings, and want of rest, either inwardly or outwardly taken, it is profitable; if outwardly you would use it, take four or six grains with three drops of Oil of Nutmegs made by expression, mix them together, and bind them in two little clouts and put it into the Nostrils, it will marvelously assuage the pain in the head, and cause quiet rest.

In the extreme bleeding of the Nose, called *Hæmorrhagy*, it is an approved Secret, that 16 grains thereof divided into two Pills, and thrust up into the nostrils, into each nostril one part, helpeth the same.

In all kind of Fevers it is good to be given with water of Wormwood, or Pill-wise alone, and if the heat remain after six hours, you may give it the second time, and after that again in like time safely, not exceeding the dose; yet let your own experience lead you, that where you see three grains will not cause rest, in the next potion you may give one grain more, and so increase *paulatim*, but increase not but upon good deliberation.

In burning Fevers it assuageth thirst, and provoketh sleep, chiefly in those Fevers in which the Party seemeth to have some show of rest, with tedious dreams and slumbers mixed.

In the disease called *Asthma*, and in the
Pthysia

Peisick, if it be used in water of hyssop, it will preserve the diseased Patient a long time: it conserveth the natural heat, strengthneth the spirits, repaireth strength lost: it is also effectual to be given to melancholy people, which are void of reason, and are troubled with the passions of the heart: it is likewise used with good effect against vomiting, and the hickeck, proceeding of wind, faintness, or debility of the ventricle.

In the superfluous defluxions of the excremental, or menstrual blood, it is an excellent remedy with *Crocus Martis*, or red Coral.

In phrensies, and madness, both inwardly and outwardly, it is good mixed with *Aqua vitae*, and the temples anointed therewith.

In the Falling-sickness, with Spirit of Vitriol, or the quintessence of Camphire, also with Oil of Almonds it is usually taken; but beware you use not this Medicine to any which are feeble through a great Cough, being oppressed with tough phlegm, and shortness of breath, for there it is not good. The dose is two, three, or four grains: if there be looseness of the belly, as is rehearsed, it worketh much better. It is best given in any occasion accompanied with waters, or other medicines, which are most appropriate to the diseases, and parts affected, and yet may very well be given alone in a Pill.

Of Troches, and first in general.

T*rochifchs*, are so call'd from the Greek *Trochifcos*, i. e. *Rotula*; and 'tis called sometimes *Cyclifcos* by them, i. e. *parvus circulus*, *ſeu orbiculus*, *Artifcos*, i. e. *parvus panis*, *ſeu paſtillus*. The Greek name hath ever ſince been uſed, and not the *Latine*.

The Ancients had three ſorts in uſe; one which they gave in Potions; another which they put up into the *Anus*; a third, which they uſ'd outwardly in oyntments. They are made of dry Medicaments powdered, which are to be made up with liquor that is not of any unctious or oleaginous quality, as either ſome diſtill'd Water, or Wine, or Vinegar, Juices of Herbs, Mucilages, Honey, Muſtrum, Syrup, Julep, and ſo to be dry'd in the ſhade; they were invented to keep the virtue of the Powders. When you uſe them, they may be diſſolv'd in ſome liquor, or mixt with Opiates, Eleſtuaries, Pills, or other Remedies.

Trochisci albi Rbafis,

ARe cooling and drying, they are used often in Injections, for Ulcers in the Yard, and other places, with plantan water, &c. they are thus made:

Rx. Coruſs waſh'd in roſe water, ʒ x. Sarcocol, ʒ iii. ſtarch, ʒ ii. gum, arabic, tragacanth, an. ʒ i. Camph. ʒß. make them into Troches with roſe water, or womans milk,

Troches of Agaric,

Purge phlegm, and viſcous humors, they are to be mixt with other purging Medicines, in lieu of Agaric unprepar'd. They are thus made:

Rx. White and light Agaric powdered and ſearc'd, ʒ iii. macerate them in a ſufficient quantity of white or rheniſh wine, wherein ʒ ii. of ſinger have been infused, and ſo make troches.

Trochisci Alkekengi,

ALlay the heat of Urine, and give eaſe in Ulcers of the Reins and Bladder, and are good in the Stone. Doſe from ʒß. to ʒii. they are thus made:

G 3

Rx. The

Rx. The berries of winter cherries, ℥ iii. gum arabic, tragacanth, olibanum, sanguis draconis, pine kernels, bitter almonds, starch, juice of liquirice, boli armenæ, seeds of white poppy, an. ℥ vi. melons, cucumbers, pompions, gourge, an. ℥ iii℔. smallage, white henbane, ambar, lemnus earth, opium, an. ℥ ii. with the fresh juice of winter cherry-berries. *F. trochisc.*

The white Troches, or pectoral Lozenges,

Good for Coughs and Hoarsness. Their Dose is from ℥ss. to ℥i. and are thus made :

Rx. Of the finest sugar, ℔ i. white sugar can did, penids, of each ℥ iv. oris roots from Florence, ℥ i. liquirice, ℥ vi. starch ℥ss. with a sufficient quantity of the mucilage of gum tragacanth extracted with rose-water, *F. trochisc.* to which if you will, you may add four grains of ambar-grise, and three of mosch.

The black Troches,

Good likewise for Coughs, are made as followeth :

Rx. The juice of liquirice, whitest sugar, an. ℥ gum tragacanth, bitter almonds blanch'd,

gum, ʒvi. with a sufficient quantity of the mucilage
of quinces extracted with rose-water, make tro-
ches.

Troches of Ambar,

S Top fluxes of blood in any part of the
body. &c. are thus made :

Rx. Ambar, ʒi. harts-horn, gum, arabic, red
coral all burnt, tragacanth, acacia, hypocistis, pom-
granate flowers, mastich. gum, lacca wash'd, the
seeds of black poppy scorcb'd, an. ʒii. & ʒii.
olus, saffron, opium, an. ʒii. with a sufficient
quantity of the mucilage of the seeds of flea-
wort, extracted with plantan water. f. trochis.
f. a.

Gordonius's Troches,

A Re good against any inward Ulcers, as
Reins and Bladder, &c. and cool the
body in Fevers, dose to ʒi. in syrup of marsh-
mallows, or *de mucilagibus*; and they are
thus made :

Rx. Of the four great cold seeds unhusk'd,
white poppy, mallows, cotton, porcelane, quinces,
myrles, gum, tragacanth, arabic, pistic nuts,
pine-nuts, sugar. candy'd, penids, liquirice slic'd,
french

Rx. The berries of winter cherries, ℥ iii. gum arabic, tragacanth, olibanum, sanguis draconis, pine kernels, bitter almonds, starch, juice of liquirice, boli armenæ, seeds of white poppy, an. ℥ vi. melons, cucumbers, pompions, gourge, an. ℥ iii℥. smallage, white henbane, ambar, lemnæ earth, opium, an. ℥ ii. with the fresh juice of winter cherry-berries. F. trochisc.

The white Troches, or peñoral Lozenges,

Good for Coughs and Hoarsness. Their Dose is from ℥ss. to ℥i. and are thus made :

Rx. Of the finest sugar, lb i. white sugar can did, penids, of each ℥ iv. oris roots from Florence, ℥ i. liquirice, ℥ vi. starch ℥ss. with a sufficient quantity of the mucilage of gum tragacanth extracted with rose-water, F. trochisc. to which if you will, you may add four grains of ambar-grise, and three of mosch.

The black Troches,

Good likewise for Coughs, are made as followeth :

Rx The juice of liquirice, whitest sugar, an. gum tragacanth, bitter almonds blanch'd,

3 vi. with a sufficient quantity of the mucilage of quinces extracted with rose-water, make troches.

Troches of Ambar,

S Top fluxes of blood in any part of the body. &c. are thus made :

Rx. Ambar, 3 i. harts-horn, gum, arabic, red coral all burnt, tragacanth, acacia, hypocistis, pomegranate flowers, mastich. gum, lacca wash'd, the seeds of black poppy scorcb'd, an. 3 ii. & 3 ii. cloves, saffron, opium, an. 3 ii. with a sufficient quantity of the mucilage of the seeds of flea-wort, extracted with plantan water. f. trochis. f. a.

Gordonius's Troches,

A Re good against any inward Ulcers, as Reins and Bladder, &c. and cool the body in Fevers, dose to 3 i. in syrup of marsh-mallows, or *de mucilagibus*; and they are thus made :

Rx. Of the four great cold seeds unhusk'd, white poppy, mallows, cotton, porcelane, quinces, myrles, gum, tragacanth, arabic, pistie nuts, pine-nuts, sugar. candy'd, penids, liquirice slic'd, f. a.

french barley, the mucilage of the seeds of fleawort, sweet almonds blanch'd, an. \mathfrak{z} ii. bole armoniac, sang. draconis, spodium of ivory, red roses, myrrhe, an. \mathfrak{z} ss. with q. s. of hydromel. f. trochis.

Trochisc. Hysterici,

SERVE in Fits of the Mother, provoke Months, expel After-birth, &c. dose to \mathfrak{z} i. they are thus made :

Rx. Of ass^a fetida, galbanum, an. \mathfrak{z} iiss. myrrhe, \mathfrak{z} ii. castor, \mathfrak{z} iiss. of roots assarabacca, long birth wort, leaves of sabine, mother-wort, nep, an. \mathfrak{z} i. dictany, \mathfrak{z} ss. with the juice or decoction of rue. f. trochis. f. a.

Troches of Rhabarb,

ARE of an attenuating and strengthening quality, purging Choler, as well by Urine as Siege, good against the Dropsie, Jaundies, and obstructions after Fits of Fevers, &c. dose to \mathfrak{z} iiss. they are thus made :

Rx. Of the best rhabarb, \mathfrak{z} x. eupatory, bitter almonds, an. \mathfrak{z} ss. red roses, \mathfrak{z} iii. of the roots of asarabacca, madder, indian spike; the leaves

*of wormwood, anise seed, and smallage seed, an.
3i. with wormwood wine f. trochis. s. a.*

Trochis. de Spodio,

Cool and bind, allay heat in Fevers, stop
Fluxes, and strengthen the retentive
faculty, and are thus made :

*Rx. Of red roses 3 xii. spodium ex ebore, 3 x.
seeds of sorrel, 3 vi. seeds of porcelane and co-
riander, first macerated in vinegar, and then tor-
refied, the pulp of sumach, an. 3iis. starch par-
ched, flowers of pomegranates, berberries, an.
3ii. gum arabic scorched, 3 is. with the juyce of
unripe grapes, f. trochis. s. a.*

Thus have I given thee the way of com-
pounding the Medicines both inward and
outward, that are most commonly used for the
curing of diseases incident to the body of
man, and which are made up by the Apothe-
caries, and sold in their shops. I have like-
wise given thee their virtues and doses, and
manner of using them ; notwithstanding all
which, I have something farther to advise the
young Artist of, concerning their Composi-
tions in general, and first of Waters.

For the simple distill'd Waters, they for the

most part, participate of the nature of the simple from whence they are distill'd, whether hot, or cold, or temperate; neither is there a necessity that the Artist should keep so great a quantity of them by him, for a few may suffice; as for the waters of cold herbs they differ but little from ordinary cold water, only they are used in winter, when the herbs cannot be got green; for the hot, *aq. card. benedict. betonicæ, angelicæ, calaminth, feniculi, hyssop. melissæ, petroselini, &c.* may suffice.

And here let not the young Artist believe that the waters of *Peony*, or *Mistletoe* of the *Oak*, will specifically cure the *Falling-sickness*, or the waters of *Primroses* the *Palsie*, as *Quercetan*, and other Empirical Chymists foolishly prattle; but only as they are prevalent against such and such an humor, from whence these kind of symptoms proceed. 'Tis likewise false which he writes, that some waters are cephalic, as of betony, marigold flowers, &c. which are preparers of phlegm for these being drunk, do no less correct the humors in the *Hypochondria's*, than in the brain. 'Tis likewise false, that the water of ashen leaves is a specific remedy against deafness; something indeed may be said, if you mix its salt therewith, and then any other salt, as wormwood, may be as effective.

ab. Your celandine, eye-bright, fennel waters, &c. are no more opthalmic, than nephritic, or cephalic, &c. So of those they call cordial, hepatic, splenetic, &c. for they only alter the humors, be they either thin or viscid, and so benefit the stomach, reins, and other parts. It doth not follow that the simples, from whence the waters are distill'd, are good for such and such diseases, *ergo* the waters are, at least not specifically, as Onions apply'd to the biting of a mad Dog, is good, but the distill'd waters of them are no better than others, &c.

For compound Waters, they are made of hot simples, for the most part with Wine or Brandy, &c. distill'd, as *aq. celestis*, *mirabilis*, &c. of which one may serve for all; where you are to Note, that all the simples of those waters cannot infuse their quality into the Wine, Brandy, or other Liquor in which they are boil'd, infus'd, or distill'd, sometimes the *menstruum* is not proper to extract them, whence the strength of some of them is extracted, and the rest not touch'd; some of them are moist, exhalable, vaporous, some must be distill'd apart, some with other things, &c. and then to add honey and sugar, as *Quercetan* and others oft do, is not only needless, but hinders the distillation; for they

they swim upon the liquor, produce froth, are of thick substance. Likewise to add coral, pearls, and gold, &c. is unprofitable, for nothing exhales from these by the Alembic. Moreover, they call some waters apoplectic, epileptic, hysteric, but vainly, as before; they have likewise their whimsical Treacle waters, which they make of the aforesaid simples, adding thereto Treacle and Mithridate, *Confectio Alchermes, de Hyacintho*, &c. from whose simples nothing can be distill'd, because they are chiefly precious stones.

Now the Artist may take notice, that there may be most excellent cordial waters prepar'd from Aromatics, by infusion onely in Wine or Brandy; as for example:

Rx. Cinam. ʒi. zinzib. ʒii caryophyllor. galang. cardamom. nucis moschat. granor. paradisi. piper. an. ʒiſs. Infuse them altogether in Brandy in a vessel well stoppt, for some dayes.

So much for hot distill'd Waters, so much cryed up by *Quercetan*, and the Pseudo-chymists. The same Errors are remarkable in their cold distill'd Waters, where he distills them with *bole-armone*, *terra sigillat*, &c. which, as you was told before, will not impart any of their virtues in distillation; so

that

that *Quercetan's* water for the phthific, and ulcer of the lungs, and pleurific, are naught, and all that contain such ridiculous idle trash; such is his water against all kind of Fevers. What, I pray, could any of our Doctors of the Post have said more? For assure your self, they cannot be for all sorts of Fevers, nor at all times. And that water which he sayes will break the stone in the bladder, is a notorious one, for there is no such thing in *rerum natura*, as the learned *Primrose* hath demonstrated, in his fourth Book of *Popular Errors* in Physic.

What I said of Waters, I may say of Syrups, there is no necessity of keeping so many in a readines, as are usually in the shops, many consisting of the same simples, or equivalent; and I think those I have set down may suffice upon all occasions. *Quercetan* indeed hath many descriptions of altering and purging Syrups, but he often promises more than he can perform; as when he sayes he can, by digestion alone, concoct crude things, dulcorate bitter ones, rectifie sharp and tart ones, without addition of sugar. Many of his Syrups, if made according to his direction, are more liker Conserves, Sapa's, or Rob's, than Syrups. He likewise shews himself ignorant in the Art he would correct, when he advises,

advifes, after many unprofitable infufions in Syrup of Roses, and others, to make digestion and depuration, to separate the thicker feces, which clarification with the white of an Egg will never do; but digestion doth not separate the feces, but by delay and time, even in a cold place they will settle to the bottom, as Apothecaries know; and then the white of the Egg does not make any thing for the separation of the thicker feces, but for the depurating the sugar, and taking away the filth which swims on the top, whence after that digestion and mixture of the Sugar, there will be need of clarification by the white of an Egg, which he omits.

Next he adds, Spirit of Vitriol, or Sulphur to his Syrups, and then I pray what virtues will not they acquire? so that Syrup of Violets will be an universal remedy, and perform the office of all acid Syrups; as of Sorrel, Limons, Verjuice, Oranges, &c. as if besides the taste they contributed nothing of virtue to the Syrups? or as if a few drops of the Spirit of Sulphur or Vitriol, would equal those virtues? no, no, assure thy self that the juices of Citrons, Limons, Oranges, Sorrel, &c. are more excellent for inward uses, and safer and gratefuller.

How ridiculous is he when he comes to *Oxymels*, who, that he may prefer Honey before Sugar, calls the faculties of *Oxymel* vitriolate, as if Vinegar and Sugar had not the same faculties; neither indeed is either endowed with any vitriolatisf faculty; honey hurts cholerick natures, so doth sugar, but honey more; the vinegar temperates the acrimony of both. *Nicolas* and *Mesnes*, authentic Galenists, have many descriptions of *Oxymels*, which in my mind are far better than *Quercetans*; so that that Chapter of his may seem to be added rather for ostentation, than use. The same may be said of his *Hydromels*, where he prefers honey before sugar.

Now for your *Lobochs*, you cannot keep them long, 'tis best to make them fresh; they all incrassate, by reason of the honey and sugar, and other viscus matter whereof they are compounded; which being mixt, a thinner renders it also viscid, as sugar-candy makes any thin humor which it is mixt with glutinous, whence such remedies do incrassate the stomach, but in the stomach and intestines there is made a separation of the thinner from the thicker parts, which cannot be done by the lungs; but what portion falls upon them is by *anacarthasis*, to be purgd out again and

and then perhaps 'tis more incrassated by staying; so that when any prescribe *Loboch de portulaca*, and such like, in spirting of blood, and add *Trochisc. de terra lemnia*, there is danger, lest if these arrive to the lungs, they stuff them, and cannot be gotten out.

As for *Powders*, there are many needlessly kept in the shops, both altering and purging, and many consist of the same simples, some more, some fewer, put only into a different order; so that they are all as it were one Powder.

So that of all the hot Powders, as *Dianisum*, *Diagalanga*, *Diacyminum*, *Dianthus*, *Rosata Novella*, &c. I have laid down *Aromaticus Rosatum* for all; the species *letificans* & *liberans*: besides, those hot things have precious Stones, Pearls, Gold and Silver, which are altogether unprofitable, as I have shew'd before.

In lieu of *Diacalaminthes*, used by *Galen*, as a remedy against wind, and other cold affects of the lungs, and other *viscera*, I have substituted *Diaireos*. For your *Species Diamargaritum frigidi*, how can that be cold, when it contains Ginger, Sanders, Wood of Aloes, Myrtle, Berries, Contrayerve, &c. all hot? and for the bone of the heart of a Hart, which

which is a very uncertain Medicine, may al-
ways be used Harts-horn. And these may
suffice for altering Powders, the which may
be made into Electuaries, by adding Sugar
dissolv'd in proper waters, or with honey.

Quercetan, and his Followers, use many
Powders also, most of which are rather for
ostentation, than profit; in one of which he
uses Cinaber, a dangerous medicament, if he
means the Mineral, and not that which we
have not, which is *Sanguis Draconis*. Like-
wise for the *Vertigo*, *Stercus Pavoris*, which I,
and wiser than himself have used, but could
never find it answer expectation. His Pow-
der for the Epilepsie consists of certain imagi-
nary Mountains, as *Essentia Corallorum*, *Mar-*
garitarum, most fallacious Medicaments,
which he himself knew not; or if he did, it
doth not follow that they are Antiepileptical.
The same may be said of your Unicorn, Ele-
phants hoof, Peorige, Mistleto of the Oak, Be-
zoar stone; which Powders, saith he, are to
be used with Purging, using an Antipileptic
water, and keeping a good order of Dyet for
a whole month; which being duly observ'd,
he may or shall not be cur'd, at last, or if he
chance to be, it shall not be by the help of
this Powder; nay, by this method of his, by
this Powder, and strictly observing his Rules,
any

any disease curable may, in all probability, be cured, and so his Powder is of more efficacy than he is aware of: So after general and proper remedies and evacuations premised, the Artist may cure a Fever with cold water and so of other diseases, especially if fit decoctions be used.

Then he hath another Powder for all affections of the Breast, which consists of opening, attenuating, binding, and incrassating Medicaments with the imaginary essences of Pearls and Coral, and Diatragacanth, which are hurtful for an Asthma, and which hath so many windings and meanders to pass through, that it loseth its virtue, before it can arrive at the wished for Haven; and if there it should only attenuate thick humors, at that rate it may as well be appropriate to the liver, as the lungs, and other *viscera*, which are first saluted by such medicines before the lungs. To pass by his egregious antipleuretic Powder, which is a lye imposed upon young Artists; it consists of such things as retard *anacatharsis*, and promote not resolution.

Then follows a marvellous Powder for affections of the Stomach, whose Base is *Radix Aronis*, prepar'd after a singular manner forsooth, because it's *Sale Aronico*; i. e. its own Salt, as Salt is full of Salt Salt; which Powder is no less pectoral, than that which the pre-

describ'd before for affects of the breast ;
it may be 'tis more pectoral : and I
would fain know why one should not as well
reach the lungs as the other?

Whether *Stercus Anseris* be such an effectu-
remedy for the Jaundies, wiser than he
have often tryed, but could not find it an-
swer his Elogiums : But how ridiculous it is
for him to think, that any one will believe
that those excrements are the quintessences of
aliments, it would go ill with those animals
that should void their quintessences, which
they had more need keep to themselves, for
the preservation of their own life.

His Powder *ad Bronchocele*, goes as well
to the foot as the throat.

His Powder for all kinds of *Hernia's*, is a
lye in the very Title ; for how can it cure a
Sarcocele ? it is binding, and so may be good
for all affects wherein adstriction is requi-
red : And thus you will find all the rest of his
Powders to labour under some of these Er-
rors I have laid open to thee.

Now for Troches, which differ little from
Powders ; for the way of making them into
that form, was invented only that the Pow-
ders might the longer retain their virtues. I
have likewise reduc'd them to a far fewer
number than I know are usually in the Apo-
thecaries

thecaries shops; for your Trochisc. of Scilla and Hedychroi, they are only made for your Treacle; which you will not have occasion for, being you are not to make any; and if you were, you'll find the same simple repeated in the composition; nor Trochisc. Cyperi for Mithridate.

In lieu of Trochisc. de Capparibus, de Eupatorio, de Absinthio Dialacca, &c. I have put Trochisc. de Rhabarb, which may serve for all in obstructions and hardness not only of the Spleen, but of all viscera. Troches of Spodiolum and Ambar, may serve in lieu of Terra Lemnia, Ramich, &c.

Of Eleſtuaries, some are call'd Opiates, because they contain Opium, which is not to temper the heat of the rest; for it self is very hot, but rather to provoke sweat, which breaks forth best in sleep, whence 'tis added almost to all Antidotes.

Of Treacle and Mithridate we have discoursed before; they that have one may be without the other; they may be used before they are six months old, without any crime. There is no need of Eleſtuar. de Ovo, at all, wherein you have others set down, where the Saffron is burnt, and the yolk of the Egg becomes oleaginous, &c. the Philoniums may be wanting likewise.

Quercetan's Treacles are more worthy to be considered than brought to use, as consisting meer whimsies, so that what I have laid down, may suffice to an ingenious Artist.

For Purging ones, I cannot commend many of them, some purge too gently, some too strongly: Those I have given thee are enough.

Quercetan hath divers, as his *Catholicon*, which seems to be some extraordinary thing, and yet consists only of *Cassia*, *Manna*, *Senna*, *Rhubarb*, and *Tamarinds*; so after that manner one may invent Compositions *ad infinitum*.

For purging Pills likewise those may suffice which I have describ'd; in all which it would be very good to use the extract of *Aloes*, because in so doing, you would leave many faeces behind. Likewise for gums that enter into Mass, they would be well depurated with Brandy, Wine or Vinegar. Which two things if the Artist would observe, he would not so much admire those laborious preparations of *Quercetan*.

In his *Panchymagogues* so many juices are needless, for one is sufficient, what Purgers he adds,

adds, are common, as *Senna*, *Agaric*, &c. whether have any of his other Pills any thing extraordinary in them, for even in his Taro Pills so much admir'd, is there any thing but what swells the mass, and may be spar'd, except the Purgers, which are but few.

Besides purging Pills, there are others which contain *Opium*, in lieu of all which *Laudanum Londinens.* may serve; which is the best that ever was invented. *Quercetius* hath a pretty way of preparing *Opium*, for sooth, which he would make one believe new, but stole it from *Hollerius*, lib. 3. de materia *Chirurgica*, he dries it with the fire till it may be powdred, then he makes an extract with vinegar, by which means the strength of the *Opium* is lost, whereby it procureth sleep, and eases pains. *Apollonius* of old dried *Opium* then mixt it with *Castor*; but *Galen* found its efficacy to be lost this way, therefore he thought best to mix it when dried.

For Extracts, the Chymists use many, several of which are inutile, as Extract of *Senna*, *Rhubarb*, and other gentle Purgers, because their strength is diminish'd by extraction; neither are they so grateful or effectual, as the Powders or Infusions of *Senna*, &c.

Then lastly for Oils, Ointments, and Em-
sters, &c. I have given thee the best in use,
which may supply the place of any that
thou shalt find in the *Pharmacopxia*'s.

THE Artift is not only to know the
way of compounding his Medicines,
on occasion be, but he must also understand
the nature of Simples, which are oftentimes
used to as good effect as Compounds. He is
to begin with Roots; where Note, that h.
stands for hot, c. for cold, m. for moist, d.
dry, 1, 2, 3, or 4, are for the degree of
quality, as h. 1. hot in the first degree,

Of Simples.

And first of Roots.

Althea,

Mollifie, digest, loosen, mitigate sharp-
ness; chiefly in the effects of the
adder, Breast, Stone, Pleurisie, Dysentery,
mixed and boil'd in milk, outwardly in Ca-
plafms, &c.

Red

Red Beets, Hot and dry, loosen the Belly by their nitrosity; 'tis an *Errhige*.

Bryony, Urges strongly ferous humors, vomit and stool, dose in substance to ʒi. infusion to ʒss.

Chicory, anoble, epatic, diuretic, c. 2.

Comfrey, Great, middle and less, are vulnerary, inwardly and outwardly good in Ruptures.

Ennula campana, alexipharmic, temperate, pulmonic, good for Scabs, &c. h. 3 d.

Eryngo, is epatic, nephritic, alexipharmic &c.

Fenel, is diuretic, carminative, bechic, strengthens the stomach, increases milk, comforts the sight, discusses wind; ʒ iv. of the juice drunk with sugar for 10 dayes fasting covered in Bed, cures long Agues, general remedies being first administred.

Lillie, digest, mollifie, maturate; good applied to Corns and Burns.

Parsley, h. d. 3. diuretic; good for Coughs, Courses obstructed, yellow Jaundice, &c.

China, Prevail much in the French Pox and are good for the giddiness of the Head, take away the pain of the stomach, and obstructions, and are profitable for the Dropsie, Colick, and Gripings of the Belly, move the Urine, procure Sweat, and are helpful against Convulsions, the Palsie, and pains of the

the joints, and a singular remedy against a Consumption.

Liquirice, is in all his qualities temperate, yet inclining more to heat; it is agreeable to the lungs and breast; rotteth phlegm, moveth expectoration, cureth the cough, helpeth breathing, and is profitable for the reins, taking away the sharpness of the urine, and healeth the sores of the kidneys and bladder.

Polypody of the Oak, is dry in the second degree, openeth the body, and bringeth away black choler and phlegm, helpeth the colick, and griping of the belly, and also the obstruction of the spleen, &c. For French Pox, swellings in the joints, pains on the side, rickets; never given alone, but with other Purgers, boil'd with an old cock, dose to $\frac{3}{4}$ i.

Salsaparilla, is of a hot quality, causeth sweat, especially extinguisheth the heat of venereal poyson, and is good for the articular diseases, catarrhs, ulcers, and phlegmatic humors; principally it is good against the French Pox.

Tormentil, chiefly us'd in the Pest, and other such diseases, where there is a Flux, for the French Pox; there is no vegetable, sayes Schroder, more us'd in Fluxes than this, Ulcers, &c.

Next of Herbs.

Wormwood, h. d. 3. stomachic, hepatic, splenic, kills Worms; ʒ i. of its salt in a spoonful of juice of limons, stays vomiting.

Southernwood, is much of the same nature.

Sorrel, and *Woodsorrel*, cardiac and epatic, open, and resist putrefaction, check cholera, excite appetite, quench thirst, whence of incomparable account in simple and pestilential Fevers.

Maidenhair, temperate in quality, useful almost in all diseases.

Maudlin, of an aromatic flavor, attenuates, resists putrefaction, epatic, loosens the belly very gently.

Agrimony, a noble epatic, hydropic, &c.

Ladiesmantle, temperate, avulnery, thickens the blood, therefore good in monthly fluxes.

Brooklime, for the Scurvey and Dropsies &c.

Dil, augments milk, helps vomit, digests, lessens venery, causes sleep; the tops boiled with oil, is for anodine and somniferous cataplasms for the head, and clysters.

Angelica, is a Bezoardic, vulnerary, provokes courses, dose of the root ʒ i. use it in Fevers.

Aristolochia.

Small

Smallage, the same with *Persely*.

Mugwort, is aperient, uterine.

Mouſe-ear, h. d. 2. binds, absterges, is ster-
pulatory and vulnerary, cures ruptures, espe-
cially in children.

Burdock, the roots are dry, pulmonic, diure-
tic, good for the Gout, tumor of the Spleen.

Betony, discusses, cleanses, &c. specific for
the head, liver, spleen, breast, womb, is vul-
nerary, for Epilepsie, helps the Pox out, and
Disury, Bruises, Worms, dose ʒi. in White-
wine, or other proper liquor.

Borage, corrects burnt choler, antihypocon-
driac, *Ego Borago gaudia semper ago*.

Branc-ursin, an emollient, for Clysters, and
Cataplasms.

Bugloss, vide *Borage*.

Coleworts, are of a mixt quality, for they
dose and bind, laid to Blysters after they are
thick, Cough, and Pleurisie.

Shepherds-purse, cold, dry, binds, used by
Peasants to solidate Wounds, nor without
success; and in febrifugous Cataplasms, ap-
plied to the Wrists.

Calaminth, h. d. 3. opens, is stomachical,
stomachic, thoracic, and epatic; helps the
Cough.

Cardus Benedictus, h. d. 2. alexipharmic,
sudorific, cures inveterate and quartane
fevers.

Centaury, h. d. splenetic and epatic, deturging, and vulnerary, gently evacuates bilious and phlegmatic humors by siege, and *ferum* by the pores; hence profitable in Fevers, Jaundies, Womens monthly suppressions, Scurvey, Worms, &c.

Cherefoil, h. d. is diuretic, and resolves coagulated blood, induces sweet sleep.

Ground-pine, h. 2 degr. strengthens the nerves, is diuretic, and emmenagogic, good inwardly and outwardly against the Gout.

Chamomile, h. d. 1. digests, mollifies, anodine, moves urine, and the courses; of singular use in the colic, &c. used in Cataplasms and Clysters.

Cheledine, h. d. 3. absterges much, carries off bile by siege and stool, sharpens the sight, good in the Jaundies, all inward obstructions, outwardly it helps weakness of the eyes, and ulcers; for which cause some put the juice which flows from the broken stalk into the eyes.

Cichory, c. d. 2. is a very noble epatic, is diuretic, chiefly used in obstruction of the liver, and in Fevers.

Hemlock, good in the tumors and inflammations of the spleen, and other parts.

Scurveygrass, h. d. 3. splenetic, diaphoretic, renders fixt and crude humors, spiritous and volatile, good in all obstructions, and tartarous diseases.

Comphrey, vulnerary inwardly and outwardly, in the Jaundies, obstruction of the liver, retention of urine, ruptures, &c.

Costmary, h. d. 3. stomachic, epatic, nephritic, hysteric.

Dodder, h. 1. d. 2. absterges, corrects melancholy, scabs, &c.

Diptany of Crete, h. d. hysteric, alexipharmic.

Dwarf-elder, h. d. discusses, moves sweat, appeases pains of the Gout, good in hernia agnosa.

Endive, vid. *Chichory*.

Liverwort, h. d. mundifies the blood, a little binds.

Horse-tail, c. d. 2. binds, thickens, stays hemorrhages, ulcers of the reins and bladder.

Maudlin, h. d. attenuates, is epatic and vulnerary, good in chachexies, catarrhs, coughs, courses retain'd.

Eye-bright, h. d. 2. is opthalmic, cephalic, used in defluxion of the eyes, and elsewhere.

Strawberry-leaves, c. d. bind a little, diuretic, oft used in Gargarisms, &c.

Fumitory, is splenetic, epatic, strengthens the inwards, purifies the blood.

Ground-ivy, h. d. vulnerary, often used in resolving the Tartar, in the lungs and other parts,

parts, good in erosions and ulcers of the viscera, &c.

Rupture-wort, c. d. of chief use in Ruptures, diuretic, cuts tough mucilage in the stomach, and other parts, carrying off bile and serum.

Moufeare, is said by a peculiar property to help ulcers of the lungs, and spitting of blood.

Henbane, c. 3. d. 1. mollifies wonderfully, causes sleep, narcotic, used in hot tumors, gout, tooth-ache.

St. Johns-wort, h. d. diuretic and vulnerary, of chief use in mundifying and consolidating wounds, in resolving coagulated blood, driving out worms.

Hyssop, h. d. 3. attenuates, its chief use in tartarous diseases of the lungs, cough, asthma; some prefer it in strengthening the stomach, before Wormwood.

Master-wort, h. d. 3. alexipharmic, resolves the tartar of the lungs in the tooth-ache, in lotions for scab'd heads, laid upon bullets to draw them out.

Lettuce, c. 3. d. causes sleep, bridles cholera, increases milk, gently moves the belly, of good nutriment.

Ducks-meat, c. moistens, used chiefly to extinguish heats and inflammations of blood outwardly in malignant scabs.

Privet, c. d. cuts and binds, in inflammations, exulcerations of the mouth, and Scurvy.

Majoran, h. d. chiefly in diseases of the head, womb and stomach, used in Eryhina's and Masticatories.

Mallows, moderately hot, humect, anodine, loosen the belly, mitigate sharpness of urine; outwardly in cataplasms, &c.

Marshmallows are stronger.

Horehound, h. 2. d. 3. used in obstructions of the liver, &c. spitting blood, difficult birth, &c. boil'd with raisins and liquirice.

Motherwort, h. 3. d. 2. chiefly for the womb, purges by urine.

Melilot, h. 1. discusses, mollifies, anodine, outwardly in cataplasms.

Balme, h. 2. d. 1. of great use in cephalic diseases, is cardiac, hyseric, in epilepsie, vertigo, &c.

Mint, h. d. 3. used in crudity, vomit, wind, weakness, hicop of the Stomach, obstruction of the liver, pains of the guts, *vertigo*, hinders milk from coagulating.

Mercury, h. d. 1. moves the belly, purges choler and water, often used in Clysters.

Millefoil, or *Tarrow*, dries, binds, used in tumors and inflammations of the yard, and other places, without any repulsion, in hæmorrhages and fluxes of all kind, stoppage

152 *V A D E M E C U M*: Or,
of urine , tooth-ach , masticated , ruptures,
&c.

Watercresses, h. d. 2. used chiefly in the
gravel, and obstructions , a Specific in the
Scurvy.

Tabacco, h. d. 3. absterges, is a sternutatory,
masticatory, vulnerary, chiefly used outward-
ly ; 'tis narcotic, heals scabs, mundifies ul-
cers, a violent vomit, to be given with great
caution.

Thorowax, h. d. used in fresh wounds, Em-
teroceles, swell'd joints , *Struma*, either in-
wardly or outwardly.

Plantan, c. d. 2. epatic and vulnerary, used
in all kind of Fluxes.

Self-beal, h. d. vulnerary , and consol-
dates.

Penyroyal, h. d. 3. used to stir courses, epa-
tic, pulmonic, dissipates gripings, drives out
the Stone and Urine, heals the Dropfie and
Jaundies ; outwardly for the Gout, cleanses
the Teeth, cures the Itch.

Lungwort, c. d. consolidates, for the phthi-
sic, spitting of blood.

Oak-leaves and buds, dry and bind, for the
tooth-ach, &c.

Cinquefoil, is a temperate vulnerary, used
in catarrhs, palfie, phthisic, gout, in correct-
ing the moistness of the womb , spitting of
blood, and cough, jaundies, obstruction of the
liver

liver and spleen, obtunds the acrimony of
Choler, stops all Fluxes, good in the Stone,
and Erosion of the Reins, *Hernia's*, Fevers;
outwardly good in inflammations of the eyes,
the juice being instill'd, in putrefaction of the
mouth, loosness of the teeth, and absterges
malignant ulcers. In Tertian Fevers they
give three Leaves, in the Quartane four; some
commend the Root held in the hand, to stay
the bleeding at Nose.

Rosemary, h. d. 2. cephalic, epatic, splenetic,
hysteric, stayes fluxes, and comforts the
heart.

Rue, h. d. 3. alexipharmic, cephalic, &c.

Sabine, h. d. 3. used in provoking months,
and *asthma*, outwardly to cure spreading ul-
cers, dry scabs in childrens heads; with cream
to take away spots in the face.

Willow-leaves, cool, dry and bind, without
any sharpness.

Sage, h. i. d. 2. absterges, binds a little,
diuretic, procures *menses* by attenuating, and
moderates them when they flow too much;
good in Palsie, Vertigo, Catarrhs; good in
Gargarisms for *Aptha's*, &c. Lastly, 'twas of
such esteem with one, that he asks,

Cur moritur homo cui salvia crescit in horto?

And answers himself,

Contra vim mortis non est medicamen in hortis.

Sanicle, h. d. binds, vulnerary, inward and outward.

Savory, h. d. 3. attenuates, good in crudity of the Stomach, *asthma*, obstruction of the months, outwardly discusses tumors, and appeases pains of the ears.

Saxifrage, h. d. 3. diuretic, chiefly used for the Stone in the Reins and Bladder.

Scabiose, h. d. 2. alexipharmic and pulmonic; good in Apostems, Pleurisie, *Angina*, Cough, *Asthma*, Plague, Fistula's, &c. outwardly in Scabs and Itch, Tinea of the head, spots of the face, pains of the hæmorrhoids, used in fumes.

Spleenwort, used in hardness of the spleen, jaundies, moves urine, *mensès*, and the Stone. *Dioscorides* writes, the Leaves warmed in vinegar, and drunk for 40 days, consume the Spleen.

Scordium, alexipharmic, used in obstruction of the liver, spleen and lungs, stufft with viscous and purulent matter, outwardly mummifies wounds and ulcers, eases pains of the gout, 'tis the basis of *Fracaſtorius's* *Diaſcordium*.

Houſeleek, c. 3. binds, used inwardly in bilious Fevers, to appease thirst; outwardly in *Angina*: The *Germans* commonly give the juice with Sugar, in Fevers and hot diseases.

Groundsel, of a mixt quality, used chiefly in choler, jaundies, worms, vomiting of blood, &c. outwardly in inflam'd breasts, scabs, *struma*, &c.

Night-shade, chiefly used in *Erysipela's*, pains of the head and heart in Fevers.

Spinach, c. m. 1. good meat in all diseases, loosens the belly, lenifies the roughness of the lungs, continually used, it begets melancholy blood.

Tansy, h. d. discusses, vulnerary, uterine, and nephritic, in worms, gripings, &c.

Thyme, h. d. 3. used chiefly in tartarous diseases, first in the lungs, as cough, and *asthma*; 2dly of the joints, as gowt, opens all inward hurts.

Coltsfoot, thoracic, used chiefly in coughs, whence called *Bechion* in Greek; 'tis call'd the son before the father, because in *February* and *March* it flowers suddenly, the leaves not yet come out, and these flowers last not above two dayes almost with the Stalk.

Mullen, moderately h. d. mollifies, and lenifies pains; 'tis chiefly used in coughs, spitting blood, griping of the belly, and the root taken 9 or 10 days together, stays the pain and flux of the hæmorrhoids.

Vervain, h. d. binds, cephalic, and vulnerary, used in affects of the eyes, old coughs, obstructions of the liver and spleen, jaundies, gripings.

griping, bloody fluxes, expels the Stone, curbs Lust, frightens Tertian Fevers, mitigates the Gout, facilitates Child-birth; outwardly for most of the said diseases.

Pauls Betony, h. d. binds, is vulnerary, and sudorific, good in obstruction of the spleen, and colic, scabs, itch, plague, &c.

Perewinkle, c. d. binds, good against ferrous humors.

Golden-rod, binds, vulnerary, diuretic, &c.

Mead-sweet, c. d. binds, alexipharmic, good for all sorts of fluxes.

Nettles, h. d. 2. open, mollifie, diuretic, a peculiar alexipharmic against hemlock and henbane; the roots chiefly commended in the jaundies; the leaves boild in Potage, loosen the belly, &c. the juice put up into the Nose, stays bleeding, &c. the dead or Archangel, with purple flowers, is commended in the bloody flux, with white flowers in the white flux.

Next of Flowers, and first of

Pomegranates, are very binding, and thickning, cooling, &c.

Marygolds, are cardiac, epatic, move courses, heal jaundies, &c.

Clove-gillflowers, h. d. cordial, kill Worms, ease in Child-birth.

Of Broome, splenetic, nephritic, epatic, h. d. 2. attenuate, expel the Stone, draw forth serous humors, by vomit, siege and urine; outwardly good in *struma's*.

Roses, as they vary in kind, so in quality, they strengthen the spirits, the pale loose, the red and white bind, the red stronger; chiefly used in fluxions, fevers, thirst, lost appetite, &c. outwardly in vomiting, head-ach, watchings, pains of the ear, *anus*, *rectum intestinum*, boil'd in wine, or otherwise prepar'd; in inflammations and ulcers of the mouth, eyes, jaws, &c. in fine, there are not more various preparations made of any one thing than *Roses* in physick.

Elder, discuss, mollifie, sudorific, anodine, used inwardly chiefly in preventing and curing *Erysipela's*.

Mullen, are in great estimation, in allaying the pains in diseases, and tumors of *anus*, and hæmorrhoids, &c.

Violets, are c. i. m. 2. dry'd they are weaker, they mollifie, loosen, expectorate, used chiefly in mitigating black choler, allaying heat in fevers, in coughs, roughness of the throat, sharp catarrhs, pleurisie, &c. they are numbred amongst the cordial flowers: for other flowers, as of *Dil*, *Camomil*, *Melilot*, &c. they participate of the same virtue with the herbs or plants they come of, and so I omit tautologizing.

Saffron,

Saffron, h. d. 2. good for the brain, quickneth the senses, cheareth the heart, causeth digestion, helpeth the diseases of the breast, lungs, and liver; it mollifieth all hardness, and ripeneth all tumors, 'tis call'd *anima pulmonum*: 'tis uterine, 2 or 3 drops of the tincture given in Fits, in *asthma*, with *ol. amygdal.* dose to ℥ i.

Of Fruits, and first of

Almonds, the sweet nourish, temperately hot and moist, lenifie the acrimony of humors and pains, and watching, arising from thence, they are chiefly used in emulsions.

The bitter, h. d. 2. open, deterge, are diuretic, outwardly they take away spots, pimples, and freckles in the face, masticated and apply'd Cataplasim-wise.

Figs, h. 2. never moderates, but humect, are pulmonary and bechic, cleanse the reins and bladder of gravel, resist poyson, used in driving out the Small-Pox and Measles; they ripen, mollifie, attract, whence from Sacred Scripture they are prescrib'd in pestilential Bubo's; some Women eat them toasted, to facilitate Child-birth; and 'tis familiar with some to put Figs into Brandy, and burn it, and give it to drink in a cough.

Cloves,

Cloves, are good in crudities of the Stomach, Tooth-ach, &c.

Cherries, are sharp, cool, bind, strengthen the Stomach, hence good in feverish thirsts, and heat. The great *Fernelius* highly commends the decoction of *Cherries* in hypochondriac affects.

Of *Citron*, *Limons* and *Oranges*, &c. before.

Cubebs, h. 2. d. 3. discufs, strengthen the viscera, and chiefly the head.

Cucumber, refrigerates and humects, &c.

Sweet-bryer, is chiefly commended against the Stone, the kernel taken out.

Dates, ripe and pulp'd, heat and bind, unripe stronger, good in sharpness of the throat, strengthen the *fætus* in the womb, help diseases of the reins and bladder.

Acorns, and *Acorn-cups*, cool, dry, and bind, &c.

Jujubs, are moderately h. and m. used chiefly in distillation of the lungs, cough, pleurisie, sharpness of urine, fervenscy of the blood, erosions of the reins and bladder.

Juniper, and *Bay-berries*, h. 3. d. 2. discufs, move urine, sweat, open all obstructions, good in the colick.

Mulberries, and *Blackberries*, are used in all fluxes, and ulcers, and inflammations of the mouth.

Myrtle-

Myrtle-berries, temperately c. d. very binding, used sometimes in inward fluxes.

Black thorn-berries, purge choler, phlegm, and serous humors, the dose of them is from xv. to xx. or dried in powder, to ʒiſs. or 40 to 60 boil'd.

Elder-berries, are alexipharmic and sudorific.

Sebestens, are temperate, between heat and cold, humect, mollifie, check the acrimony of humors, in sharp catarrhs, urines, bilious fevers, &c.

Next of Seeds, and first of

Anise, d. 3. attenuate, diuretic, augment milk, is pulmonic and stomachic, discuss winds, ʒi. given to Infants, gently cast out, upwards and downwards, any thing offensive.

Carway and Coriander seeds, are much of the same nature.

Cucumber, Gourd, Melon, and Pompion, are called the four greater cold Seeds, and are used in antipleuretic, antinephritic, antiphrenetic, &c. emulsions.

The 4 lesser cold seeds, are 1. *chichory*, and *endive*, a most noble epatic, c. d. absterge, frequently used in bilious fevers; 2. *lettuce* and *porcelan*, are good in a virulent Gnorrhæa, Scurvy, kill Worms, &c.

Beans,

Beans, c. d. 1. increassate, exterge, good in *Diarrhea*, *Lienteria*, &c. outward in cataplasms.

Fenel, much of the same nature with *Anise*.

Fenugreek, h. 2 d. 1. mollifies, anodine, scarce a cataplasme us'd in Chyrurgery for the said uses, but it, or its mucilage enter into't, often also us'd in emollient Clysters, because its mucilaginous substance obtunds acrimony, plasters over the corroded intestines.

French Barley, c. d. 1. is diuretic, digests, softens and ripens all hard swellings; is good for inflammations, excelleth against the soreness of the throat, comforteth, absterges, I commonly use it thus: Put a heaped spoonful into a Pint of running water, wash it well, boil it a walm or two, pour out that water into a Bason, and use it when it is cold, either for Juleps or Emulsions, or any other ways.

Line-seed, h. 1. digests, us'd in coughs, pleurisie, &c. outwardly for tumors and spots.

Lupines of the same nature with *Beans*.

Rape-seed, provokes Venery. used to expel the Small-Pox.

Worm-seed, may be used prepared, i. e. macerated in vinegar 3 or 4 dayes dried.

Mustard, h. d. 3. attenuates, draws, used chiefly to stir the appetite, in hypochondria's, and quartan and quotidian Fevers, from a tartarous.

tarous mucilage, before the Fit dose ʒi. and in the Stone.

Wheat-flower, mollifies and discusses, used in inflammations and fluxions of the eyes in pultis; dry, is apply'd in Erysipela's, and pains of the Gout, the brain in scurfs, &c. to the head, and ease pain in pultis; in Clysters for griping of the guts.

Starch, is moderately hot, levigateth the parts exasperated: it is effectual against the fluxions of humors into the eyes, against pustules and hollow ulcers, it filleth with flesh, stoppeth spitting of blood, helpeth the roughness and foreness of the breast and throat, and easeth the cough: it is very good in the fluxes of the belly, to be given in Clysters against inflammations, and excoriations in the intestines.

Farina volatilis, or mill-dust, is used in compositions, to stay fluxes of bleeding wounds.

Next of Gums, Resins, Gum-resins, Balsams, and concrete Juices, and first of

Ammoniacum, h. 2. d. 1. digests, draws thorns out of the flesh, moves the belly, is splenetic, used in arthritic pains, in resolving the tartarous, viscous mucilage of the lungs and mesentery, &c. dose to ʒi. outwardly in schyrrous tumors, &c.

Arabic,

Arabic, h. m. 1. thickens, and obstructs the pores, blunts the acrimony of medicines, helps coughs, &c.

Sarcocol, h. 2. d. 1. consolidates, ripens, wonderfully profits in fluxions of the eyes, &c. macerated for five dayes in Asses or Womans milk, then mixt with rose water, and laid upon the eye-lids, &c.

Tragacanth, much the same with *Arabic*, making a *linctus* with honey, let it melt under the tongue; good in pain and corrosion of the reins and bladder, dysentery, in broth, and in clysters; in *aq. ros.* or milk for fluxions of the eyes.

Tacamahaca, h. 1. d. 2. very binding, digests, &c. of great efficacy in pains of the joints. The *Indians* use it in all pains, so there be not inflammation.

Cypress and *Chio Terebinth*, good in coughs, and other affects of the lungs, with honey, moves the belly and urine; 'tis to be wash'd, and so you may mix it with the yelk of an egg first, and then dissolve it in any proper liquor, or make it into Pills, being boil'd in some convenient liquor, and then powdred. The common is used almost in all Plasters.

Thus, h. 2. d. 1. binding somewhat inwardly for divers diseases of the head and breast, and fluxes, coughs; outwardly fills ulcers with flesh, heals redness of the eyes, mixt

mixt with Womans milk, and *aq. ros.* first impregnated with often extinction of *Thur.* and made into a liquid *collyrium*.

Pitch, discusses, digests, &c.

Camphor, resists poyson, used in malignant Fevers.

Mastich, h. d. 2. binds a little, mollifies, used in fluxes, coughs, &c.

Myrrhe, h. d. 2. opens, resists putrefaction, used in obstruction of the womb, and viscous mucilage of the lungs and intestines, cough, hoarseness, colic, worms, fluxes, and outwardly in plasters for tumors.

Liquid Styrax, mollifies, dryes, good in coughs and catarrhs, hardness and obstructions of the womb, loosens the belly, if taken with terebinth made into pills.

The true Balsam, as I said before, is not to be had, in lieu whereof we use 1. Balsam of *Tolu*, which is h. d. used in asthma's, &c. 2. of *Peru*, h. d. mollifies, used chiefly in phthisics, nephritics, obstructions, weakness and pain of the stomach; outwardly eases cold pains, the gout, fresh wounds, bruises, fevers, anointing the spine before the Fit, and giving some drops inwardly in Wine, and repeating it, dose *ad gut. vi.*

Liquid ambar, h. 2. m. 1. resolves, deobstructs, used in perfumes, &c.

Acacia, c. d. 3. bind, used chiefly in fluxes.

Hyp

Hypofistis, of the same nature.

Juice of liquirice, is temperate in all his qualities, but exceedeth somewhat in heat; lenifies the throat, and mitigates the asperities of the arteries, cleanseth the bladder, and is good for the cough, moveth expectoration, and is very profitable against all vices of the lungs and throat.

Opium, procures sleep and sweat, *laudanum* is alwayes used for it.

Sugar, h. d. 2. nourishes, opens, moves the belly and urine, resists putrefaction, helps coughs, &c.

Tartar of Wine, attenuates tartarous and thick humors causing obstructions of the liver, spleen, mesentery, reins, hypochondria's, &c. whence the Chymists falsly call it an universal digestive, upon which account they often premit it cathartics; and to loosen the belly, they give to ʒ ii. adding to gr. ii. of *Diagrydium*, or *Gutta Gamba*; the cream or chrystal is most used.

Next of liquid Juices, and first of

The juices of Limons, Berberries, Citrons, Aurange, Pomegranates, Roses, Woodforrel, have the virtues of their Fruits, of which before.

Verjuice, c. 2 used in heat of the Stomach and Hypochondria, yea, some say 'tis better than Vinegar in all hot diseases. Oil,

Oil, h. m. mollifies, digests, moves the belly, (taken \bar{z} i. in warm Ale) corrects the dryness of the breast, mitigates the griping of the belly, loosen the urinary passages, used in clysters often, and tumors; taken with hot water, it moves vomit.

Oleum Omphacin, is prest from unripe grapes, it cools more than the ripe.

Of things bred from Plants in several places before.

Of living Creatures, their parts, excrements, and other things taken from them, and first of

Aselli, Sows, digest, open, &c. hence they are of peculiar use in resolving tartarous mucilage, and reducing the Stone to a mucilage, as some say, *sed haud credo*, in deobstructing the viscera, jaundies, colic, nephritic pains, and difficulty of urine, *asthma*, and loss of appetite, from the mucilage of the Stomach. Laid alive upon a *Phagedana*, some say cure it; dose to \bar{z} i. in powder with wine, or other nephritic liquor.

Snails, cool, consolidate, lenifie, agreeable to the nerves and lungs; hence used in phthisic, and cough, heat of the liver, and colic; outwardly they break carbuncles and biles, laid on alone, or with Bulls gall; consolidate wounds

he bel wounds and ulcers, especially of the nerves ;
its the igitate in gouty inflammations, draw out
ping of over in dropfies, and hydrocele's, bruised
used in with hyffop, and apply'd, stay hæmorrhages
with h to the forehead. The fatness of their
moth, heals redness and pains of the eyes, and
unrip intercepts defluxions to the eyes, laid to the
rehead with the white of an Egg. The sli-
y matter that comes from them, when
placick'd, is emplastic, and intercepts fluxions
to the eyes, apply'd as before. Snail-ashes
al the choppings and scurffiness of the
ts, and lin, and stays the gleetings humors.

of Earth-worms, are mighty diuretic, diapho-
tic, anodine, discufs, mollifie, increase milk,
e they utinate wounds of the nerves, and other
s mu erts ; used in apoplexies, convulsions, jaun-
ilage, tis, dropfie, gripings in children, caused by
Crings worms ; the scorbutic, running, or wandring
pains, out ; they are given inwardly either bruised
of ap and strain'd, or dryed and powdered ; out-
natch wardly alive to Whitloes till they dye, dead in
cure Cataplasms ; their ashes put into the hollow
e, or moth, easeth pain.

able flow of the parts and excrements of living
ath- Creatures, &c. and first of

Fats, Grease, Suet and Marrow of living
Creatures, are for the most part anodine, mol-
lifying,

lifying, discussing, &c. more or less, according to the nature of the Animal they are taken from, and their age, for the older discuss more, and mollifie less.

Album Græcum, dries, absterges, good in *Dysenteria*, Colic, &c. outwardly blown in to the throat, it heals the squinancy, malignant ulcers, sprinkled upon them pultis-wis it mollifies and break tumors; anointing the belly, it draws out dropfical waters; the other alone, or with *ol. rosar.* takes away wharts.

Crude Harts-horn, resists putrefaction, provokes sweat, strengthens the natural balsam, hence 'tis profitably used in malignant fevers, small-pox, &c. where sweating is requisite 'tis to be used in decoction, or infusion, and never crude.

Elephants tooth, cools and dries moderately, strengthens the viscera, stays whites in Women, and other fluxes; good in jaundies, worms, obstructions, pains of the Stomach, in Powder the raspings may also be given for the same uses in infusions.

Ichthyocolla, i. e. *Izinglass*, used in glutinating Emplasters, and Gellies, for Gonorrhœa and Fluxes.

All *Galls* calesie, dry, discuss, kill worms and are good for dulness of the eye.

All *Blood* calesies, binds, that of Birds, by reason of its nitrous faculty, absterges, as *Doves*, *Kites*, *Vulture*, &c.

Dungs of Birds are wholly of a nitrous quality, whence they powerfully discufs, &c. but those of Cattle anodine.

Urines are hot, dry, and abfterging.

Castor, h. 3. d. 2. attenuates, diffufes wind, ftrengthens the nervous parts, provokes months.

Mofch, h. 2. d. 3. diffufes, is cordial; Dofe to gr. v.

Zibet, the fame.

Things from the Sea.

Ambragrife, of the fame virtue with *Mofch*, *Zibet*, &c.

Ambar, heats, ftrengthens, ufed in Catarrhs, Epilepfie, &c. all Fluxes. Dofe to ʒ i.

Sea-mofs, c. d. kills Worms inwardly and outwardly. Dofe to ʒ i.

Corall, dries, cools, binds, purifies the blood, &c.

Sperma ceti, humects, refolves, is anodine in the colic and gripes in children, and foughs. Dofe to ʒ ii. fome anoint with it in the Small-Pox, to fill with flefh.

Next of Metals, Stones, Salts, and other Minerals, and first of

Alum, 'tis astringent, mendeth putrified ulcers, drieth the moist, consumeth superfluous flesh, taketh away the itch, cureth the scab, is very profitable in lotions for ulcerations of the mouth, throat, or elsewhere: being burnt is most used to dry up ulcers, and induce a cicatrice.

Antimony, is astringent, and drying, used to absume excrescency, and procure cicatrices, mundifie ulcers of the eyes, in *Collyria's*.

Mercury, inwardly mundifies the blood, cures the *Lues Venereæ*, kills worms, helps difficult labour; anointed, cures all scabs, lice, resolves hard tumors, &c.

Bole-armenie, is very dry and astringent; a good medicine in resisting fluxes of blood, helping the catarrh, dysentery, and ulcers of the mouth; good in the Pestilence, and other like infections.

Quick-lime, burns to a crust; the washed dries without mordacity, is good in consuming macious ulcers, &c.

Vitriol, h.d. binds vehemently, kills worms. *Chalk*, dries, absterges, is emplastic, is sometimes inwardly in heat of the stomach.

Crystal, binding in all fluxes, begets plenty of milk, good for the Gout and Stone; 3 i. powdered with *ol. amygd. dulc.* cures them, have taken *Mercury*.

Lytharge of gold and silver, dry, bind, used in most Emplasters.

Minium, binds too, &c. used in Unguents Emplasters.

Nitre, resists putrefaction, quenches thirst, cuts tartarous humors, resolves clotted blood, mitigates pain; where the body is loose, 'tis not given so well; outwardly, in inflammation of the jaws, &c. in refrigerating topics 'tis dissolv'd in fit liquor, lint dipt in't, and appli'd, and in burns.

Ostiacolla, quickly glutinates bones; it may be given inwardly to 3 iß. and put in Emplasters.

Sulphur, h. d. appropriate to the breast, opens, resists putrefaction, provokes sweat; hence used in phthitic, cough, pest, &c. outwardly it discusses hard tumors, heals itch, &c.

Tutie, is the excellentest of all medicines, which dry without mordacity; if wash'd, fit for cancrus ulcers, in *collyria's* for fluxions and inflammations of the eyes.

Of simple and compound Medicines, and their qualities, &c. in general.

THE Artift is by all means to understand the operation in general of the simple and compound Medicines he is to use both inwardly and outwardly ; of the compounds before, as for the simples, we are to begin with those that are used in altering and preparing humors, and first of *Choler*, which because 'tis hot and dry, is to be cool'd and moistned ; if thick, 'tis to be attenuated ; the effecting of which purposes, you have Vegetals, Animals, Minerals, at your service as hath been shewn before in particular.

Phlegm, by reason of its thick, viscous, dry, my, cold quality, requires heating, attenuating, inciding, deterging medicines, unless it be salt, then are cooling and moistning to be used, as in *Choler*.

Melancholy, which is *fax sanguinis*, being cold, thick, dry, earthy, stopping the viscera ought to be prepar'd with moistning, heating, attenuating medicines, and such as open and deobstruct the passages ; all which are performed by such medicines as are of the same nature with preparers of *Phlegm*.

Black Choler, because 'tis hot and dry, as Choler is, must be cool'd and moistned, and attenuated, by reason of its thicknes; all which may be done as before in *Choler*.

Now when humors are artificially prepared, they are to be purged, and carried off by siege, or vomit, sweat, or urine, that they may no longer infest the body, or cause a relapse. Now these following purge *Choler*.

Cassia, fit for all times and ages, except a moist Stomach, then 'tis corrected with anise, &c. or accuated with Rhubarb. Dose from $\mathfrak{z}\mathfrak{i}$. to $\mathfrak{z}\mathfrak{ii}$.

Manna, from $\mathfrak{z}\mathfrak{i}$. to \mathfrak{ii} . is gentle, in Broth.

Tamarindi, from $\mathfrak{z}\mathfrak{ii}$. to \mathfrak{iii} . in convenient decoction with Rhubarb, as in *Cassia*, fit for all persons and times.

For *Aloes*, use *Aloes Rosat*. hurts hot and dry bodies, women with child, those that void blood by siege and vomit.

Rhubarb, vacuates Phlegm too, and binds after, good in bruises, especially dried well; or else boil'd or infus'd in some convenient liquor, as white-wine, and then cast away the first decoction, boil it again, and strain it hard, which binds more, *cor hepatis*, it may be given to all ages, and women with child. Dose to $\mathfrak{z}\mathfrak{ii}$. infused to $\mathfrak{z}\mathfrak{ss}$.

Scamony, strongly vacuates thin and serous humors, not gross; must never be given with-

out lubricating, cooling things, as juice of quinces, mucilage of gum traganth, yelk of an Egg, &c. the prepar'd, is call'd *Diagrium*.

Au Mirobalans, are like Rhubarb, but purgative less.

Black Choler, is purg'd by 1. *Senna*, which though it be plac'd as the chief of *Melanchogues*, yet 'tis, I must tell you, *aliquid transcendente*, as I may so say, and may be reckon'd a *cholagogue*, *phlegmagogue*, *hydragogue*, &c. and was of so great esteem with my ever honoured Master, Dr. Patin, that he us'd to call it *miraculum naturæ*; and indeed it would take up a reasonable Volume to recite its virtues; for,

*If any medicine e'er deserv'd to be
Call'd universal, sure 'tis Senne.*

Black Ellebor, in contumacious Diseases only, and then to the strong, in decoction or infusion, to 3 ii.

Phlegm, is purg'd by 1. *Agaric*, safe for all ages, but hurts the Stomach. Dose to 3 corrected with *sal. gemmæ*, *ol. amygdal.* &c.

Nolo damnosum Turbith mea viscera turbare

'Tis very strong, and purges from remote parts, in powder to \mathfrak{z} i. in decoction \mathfrak{ii} . corrected, as *Agaric*.

Hermodaëils are of the same nature, dose and correction.

Meehoacan, safe to all ages, purges water. Dose to \mathfrak{z} i. in Broth, Ale, White-wine, or *ol. amygdal.*

The same of *Jalap*. Dose to \mathfrak{z} i. in broth, &c.

Hydragogues, as such, as purge serous humors; the stronger sort of *Phlemagogues*, or in greater Dose, become *Hydragogues*.

N. B. These strong Purgers are to be given in Broth, or Posset-drink, Whey, or *ol. amygdal. dulcinum*; to correct their sharp, fiery, inflaming quality, that they hurt not the noble parts, &c.

Things causing vomit, act by an oleaginous quality, quantity, or acrimony; they are either gentle, as warm water, water, and vinegar, and honey, butter melted, simple oil; or middle nature, as the middle bark of the walnut tree, gathered when 'tis juicy and dried. Dose to \mathfrak{z} i. Asarabaca root to \mathfrak{z} iv. Laurel leaves, Radish seed, to \mathfrak{z} iii. Agaric and Nettle seed to \mathfrak{z} i. with water and honey, or fat broth. The vehement are white Vitriol, in some convenient liquor, to gr. xv. *Urum. Antimonii*, and *Crocus Metall.* to gr. vi.

Of *Diuretics*, some are hot and dry, 3 d. and of thin parts, some cold ; they are proper for hot reins and liver, the same with preparers of phlegm : where note, that *Diuretics* are onely attenuating , if they be too gentle, the humor very thick, if they be given in a small Dose ; and on the other side, Attenuaters become *Diuretics*, if they be strong, copious, the humor thin. The cold and temperate, are made of preparers of Choler.

Sudorifics, perform their office, either because they are hot and dry to the 3d degr. or by an occult quality ; as *China*, *Sarsa*, *Guajacum*, *Saffras*, &c.

After general evacuations , particular follow. Attenuating things purge the head by the nostrils as *Errhins*, by the mouth, as *Masticatories* and *Gargarisms*, they must be sharp such as in preparers of phlegm ; but Mercury is the most potent of all, which purges all humors from all parts of the body by the mouth.

Bechics vacuate Humours contain'd in the *thorax* by the mouth ; with cough and spitting, which must be of such things that purge not properly, but prepare the humors that they may the easier be expectorated by cough.

These are the chief *materiae medicae* of internal and external Remedies.

From preparers of bile, and things of such like nature, you may be furnished with Refrigeraters.

Indurating medicines are such as render the body unfit to yield to touch, they are cold, and of thick substance, they in craffate thin humors, bind fluxes of the belly, months, and blood in wounds; outwardly they repel, condense the skin, so that nothing can evaporate; all which is done by cool things, &c.

Much of the same nature are *Epulotics*, for they must dry the upper flesh.

Many also of the foresaid are glutinating, to which add *Tbus*, *Gum*, *Elemi*, *Aloe*, *Hares hair burnt*, &c.

Of the afore said *Astringents*, are likewise *Emplastics* made.

From preparers of *Pblegm*, are used things to discuss wind, and provoking *menstrua's*, and resolvers, attenuaters, &c. to which resemble attracters, which are to be hot and dry ad. and of thin parts; but when they ascend the 3. d. they resolve too, and are called *Metasyncritica*. But those which by their too much heat and thin parts, raise Blisters, as *Roots of Sow-bread*, *Hermoadcils*, *Garlick*, *Onions*, *Leeks*, *Crowfoot*, *Sinapis*, *Fermentum*, *Stavifagria*, *Cantharides*, are called *Vesicatores*.

Caustics and Escharotics, are strongest of all,

178 VADE MECUM: Or,
as Black Sope, with common Salt, Calx Viva,
Tartar calcin'd, Vitriol. ust. Lap. infernal. red
hot Iron, &c.

From all these before recited, may be had
Remedies for the eradicating divers Diseases;
as to calefie the Head, Stomach, Liver, and
Bowels, if occasion be, take things preparing
Phlegm, and things outwardly that attenuate
and resolve; but if you would refrigerate those
parts, then take those things that alter Bile, and
outward coolers.

Things against the Diseases of the Eyes
are call'd *opthalmics*; of which some are anodyne,
and repel; some dry, or moisten; some digest,
or resolve; some deterge without pain.

Thoracics are divers, some purge, or rather
prepare excrementitious humors, contain'd in
the *thorax*, and they are such as alter Phlegm.

Others inraffate thin humors, they are
cold and temperate, to lenifie coughs, and
acrimony of humors.

Of *Cardiacs*, largely before.

Augmenters of milk, are things that beget
good juice, and nourish much; but medicines,
such as moderately attenuate, as moving
Blood to the Dugs, and herbs must be
green; chrystal powdred to ζ i.

Those things lessen milk, that either refrigerate
and thicken, or dry, &c.

Stomachics, both cold and hot, are of the same nature as medicines preparing *Pblegm* and *Bile*.

Cold and hot *Hepatics* are taken from thence too.

Splenetics, are such as attenuate, mollifie and open thick and seculent humors, as in preparers of *Melancholy* and *Bile*.

Nephritics, are such as help suppression and heat of Urine, Gravel, Stone, obstruction from viscid humors: against all, but breaking the Stone, you have the same Remedies, as for Preparers of *Pblegm*, *Bile*, and *Diuretics*; the which will also cause the Stone to be voided; but if you would have medicines to break the Stone, truly I am of the opinion with the learned *Primrose*, in his *Vulgar Errors*, that there is no such medicine *in rerum natura*, for Reasons too long here to recite.

Hysteries, are hot, as either move courses, which is done by such as prepare *Pblegm*, or such as prohibit their too much flowing, such are laid down in *Astringents*; or such as corroborate the womb, which are such as heat and strengthen the brain.

Ambritics, are of the same nature with *Cephalics*, whether hot or cold.

Things killing worms, must be either bitter or sharp, which by a penetrating quality dissolve

Solve their substance ; or *astringent*, to bind them together ; or lastly *oleous*, to shut up their pores, and to hinder transpiration, by which they only live, and so suffocate them.

Semnifics, are such as afford fit matter, as meats and drinks of good juice, and much nourishment ; or stir up lust, or are windy, such as Roots of *Eringo*, *Artichokes*, *Sparagus*, *Satyrion*, all *Bulbs*, *Cucubs*, &c. But those that extinguish it, do refrigerate, and over-dry.

Vulneraries, are things whereof Potions are made for the cure of wounds and ulcers.

Anodines, ease pain, and must be of temperate nature, or hot and moist in the 1 deg. and *analogous* to the native Heat. But sometimes in raging pain, we are forc'd to use *Narcotics*, as roots and leaves of *Hemlock*, *Henbane*, *Mandrake*, *Poppy*, &c.

Emollition, is to be used in hardness and driness ; tis done by things hot and moist in 1 and 2 deg. such as *Anodines*.

Suppuraters, are also hot and moist, empla-
stic, and obstructing the pores, such as *Ano-*
dines and *Emollients*, always to be used in the
state of a tumor.

The Tumor being fully come to Suppu-
ration, and *pus* procur'd, it must be open'd
with an incision knife, actual or potential
cautery, then the *pus* must be deterg'd,
which for the most part is done by things of
a bit-

a bitter or nitrous quality ; the stronger of these are for fistula's and malignant ulcers.

The ulcer being deterg'd, 'tis to be fill'd up with flesh, by means of gentle dryers, and detergers, without acrimony, or great heat, lest they absume the blood, the matter of flesh, and heat the efficient cause.

Sarcotics only remove impediments ; they are divers, according to the nature of the Patient, for the dryer are for dry bodies, moist for moist, as women and children ; if they be too weak, the ulcer will become sordid ; if too strong, they will exasperate.

If flesh be luxurient, 'tis to be absum'd by Cathartics, not corrupting the near parts : they must be of thin substance, hot in 3 or 4 deg. such are *burnt Alum, Præcipitate, Ol. Vitriol. Sulphur, &c.*

The Ulcer being artificially fill'd with flesh, and equal, 'tis then to be cicatriz'd ; by things that dry, to absume superfluous humidity, for the skin is dry ; they must bind, to contract the flesh without evident heat or sharpness, except to strong bodies.

Now the Artist must not rest here, but he must farther what belongs to the forms and compositions of medicines, both inward and outward ; and first of

Suppositories, or Glandes, from likeness, good to irritate the expulsive faculty, where Clysters

sters cannot be admitted, and to bring forth Clysters too long retain'd: they need not be too long, their often use procures the hemorrhoids, and ulcers, a candles end, or violet confect is enough for children; others are made of the juice of Beets, Mercury, Radish, Althea, &c. with honey boil'd hard, or castile sope alone, or honey boil'd, adding hier. pic. sal. an. ʒʒ. as the nature of the Patient requires. In Ulcers, make them of Empl. divinum, de cerus. &c. to ease pain of sewer, vitel. ovor. cum butyro, &c.

Clyster, lavamen, enema, is of liquid substance, administred at the anus for divers, and those very profitable uses, they are made of milk, water and honey, oil, broth, wine, or any decoction the Artist sees proper for his purpose; if to loosen and deterge, take the common decoction, and add double or triple the dose of purging Electuaries; if to mollifie, take cassia, mel. viol. &c. if to ease pain, vitel. ovor. ol. ros. viol. lac. crem. bordi. amygdal. dulc. 4. sem. frig. maj. all these good in Fevers, with decoction of viol. lac. inc. borag. prun. bord. &c. In Ulcers, after detarging, you must consolidate with astringents, but the juices of the herbs are more effectual than the decoction. If wind cause pain, use herbs that prepare phlegm. The quantity must be less for children; or when you would have them

them retein'd longer, in colic, nephritic, in great plenitude of excrements, inflammation of the belly, *enterocele*, women with child, those that are shot breath'd. In others, use ℥i. of liquor more or less, as bigness of the body and age is, oils, ʒ ii. honey or sugar, ʒ ii, iii, or iv. *vitel. ovor.* ii, iii. salt, ʒ i. Now Clysters revel, derive, evacuate, so that there is no part of the body that finds not profit by them, chiefly the womb, reins, spleen, &c. and by consequence the brain; keep them longer to ease pain, longest to glutinate, shorter in deterging. Nutrient Clysters are made of Wine, B oths, Milk, Barley, Almonds, Eggs, and a little Sugar, to which you may add cooling herbs, but clear the excrements: for the worms, give bitter things at the mouth; and milk, and sweeten things in Clysters.

Injections are used to divers parts of the body, and are made of the same things, as Clysters only.

Pessaries are for the womb, like *Supposito-ries*, they are made of Opiats, Juices, Liquors, Powders, Ointments, Honey, Oils; either as *Glanders*, with Honey only boil'd and Powders; or of things before, imbib'd with Flax or Cotton, wrapt up in Silk, or fine Linnen, about the bigness of a great finger, they are either to mollifie, ease pain, open, or bind.

Nascale is a round *Pessus*, made of the same things

things for Virgins, and Ulcers that will not admit of *Pessaries*.

Apozems, are made of divers Simples boil'd, to prepare or purge humors, as of Woods, Roots, Barks, Leaves, Fruits, Seeds, Flowers, Spices; mostly Liquirice is added to all, because it lenifies, humects, opens, &c. *Borage*, *Buglos*, *Adianth*, because they are temperate, as *Passule*, *Hord.* & *pruna acida* in hot diseases, *dulcia* in cold; sometimes *Hydromel* for phlegmatic diseases.

Commonly they are made of ζ vi. of Roots, Woods, and Barks, ζ ii. Leaves to M. x. Seeds to ζ iß. lesser sort of fruits to ζ i. the greater are added by number, as N^o. xii. to xx. flowers, fuz. vi. spices are added in the end, not to be boil'd much: first the Woods, Roots, Barks, are to be boil'd, then Leaves and Stalks require most boiling, next Seeds and Fruits bear lesser boiling, Flowers and Spices the least. The Artift is to prescribe what liquor they are to be boil'd in, according as he sees fit, as common water, or distill'd, or barley water, or hydromel, in pituitous cases, in melancholy whey, in obstructions chalybeat water, and wine, and sometime vinegar.

The quantity of ingredients and liquor is left to the judgment of the Artift, as the quantity more or less he intends of the *Apozems* but if bitter, the less must be: there is no

need

will not need of so many kinds of Simples, the best may be made of two or three harder things, as Woods, Roots, require more liquor and boiling, which is often left to the discretion of the Artist, the Artist says in the Prescription.

F. decoctio, in aq. font. q. s. when 'tis boil'd, 'tis to be strain'd, hard, or gently; and sometimes clarified with alb. ovi. which strain'd liquor and clarifi'd, must be determined in quantity, viz. ℥ i. pro 3 dosib. &c. after dissolve honey, sugar, or Syrup to every dose ℥ i. thus prescribing, in qua colatura clarific. dissolve syr. violac. & capil. ven. an. ℥ ii. &c. Sometimes juices with sugar are prescrib'd thus, in colatura dissolve succorum depuratorum boragin. acetos. an. ℥ i. sacchar. alb. ℥ ii. or q. s. lastly, 'tis aromatiz'd with some simple powder, as cinamon to beat; sanders, or elect. triasantal. to cool, thus: F. Aposem. clarific. & aromatizat. ℥ ii. cinam. pro iv. dosib. matutin.

For purging Apozems, they are made of the same altering medicines, in which you are to boil either Polipody, Epithym, Jalap, Turbith, Hermodaetil, &c. as your case requires; or to infuse Senna, Rubarb, Agaric, &c. ty'd in a fine cloth, because their strength wastes in boiling; then straining it, add some syrup or juice, or infusion of Rose and Peach Flowers in the Spring.

Of Syrups before.

Juleps,

Julaps, *quasi iolabion*, *violarum infusio*, they say invented by the *Arabians*, and signifies as much as pleasant Potion with them, known to the *Grecians*, for assuaging thirst, &c. not so much boild as a Syrup, and hath less Sugar, and is also made of a triple or quadruple proportion of decoction, or distill'd water to any kind of Syrup the disease shall require; sometimes *Spirit of Vitriol* is added, *ad gratam aciditatem*.

Examples of *Julaps*, are first *Julapium Alexandrinum*, alias *Syr. Regius*.

Rx. Red-rose water ζ iv. white sugar, ζ i. Coque s. a. utendi tempore.

Julepum Rosatum, is prepar'd as *Syr. Regius*, of pale Rose-water.

Julepum Violarum, is made of the water of Violet Flowers and Sugar, as in that of *Roses*.

Potions and *Infusions* are almost the same, both either *purging* or *altering*.

The *purging* is made of *Loosners*, dissolved in some *purging* or *altering* decoction or infusion, or both, or distill'd water: the dose to ζ iv. sometime are dissolv'd, *Manna*, *Cassia*, *Tamarinds*, &c. or some solutive Syrup, or Electuary, or Powder, as *Rheum*, *Mecboan*, *Jalap*, *Sanā*, &c.

The *altering* is made only of *altering* medicines, to ζ iii. of Liquor, ζ i. of Syrup, Powder, or Electuary, ζ ii.

To these may be refer'd Dyets, of which
venereal distempers.

Cock-broth, is a kind of *Apozem*, made by
filling a Cocks belly with fruits, seeds, flow-
ers, leaves, roots, as sometimes *China* and
Sassa, proper for the disease, letting them boil
till the flesh be almost ready to part from the
bones, then strain it, and add Sugar, or con-
venient Syrups: dose to ʒ viii. infuse for the
Phthific China, *Sassa*, or *Sassafras*, to ʒ ii. in
 ʒ xii. or $q. s.$ then put in the belly of a
Pullet, with fruits, as before, and Barley, &c.
use it for many dayes without sweating, ad-
ding purging things 'twill purge, as *Polipod*.
Sem cartham, an ʒ ʒ . *Senæ Epithim*. an. ʒ ʒ . *Sem*.
mis. fenic. an. ʒ i.

An *Emulsion* is of a liquid form, made of
Amyg. dul. nuclei pini, ad ʒ ii. *sem frigid mai*.
&c. ad ʒ i. bruis'd in a Stone-mortar, pou-
ring on ʒ i. of Barley-water, with Liqui-
rice, by degrees, and strain it, which is Al-
mond milk, if you add Syrup of Violets, &c.
'tis call'd *Emulsio*.

Here comes in the use of *Milk*, often used
in *Phthistics*, *Dysenteries*, &c.

R. Lact. Asin, ʒ iv *Sacchari* ʒ ʒ . or *Sacch*.
Rosat. or Violat. for the first dose, the next in-
crease ʒ i. to xii. or xvi. then return by degrees to
the former quantity, 2 hours before dinner; pur-
ging first; in *Dysenteries*, Cows milk may do.

Whey

Whey is medicinal, cools in Fevers, vacuates melancholy humors, tempers the liver and reins, best in Summer; when you may boil a little, or infuse all night in ℥i. of *whey, fumar. chicor. an. mss. in colatura* dissolve Sacchar. ʒiʒ. augment the dose next day, till you come to ℥ii. then returning to ℥i do this for a month, abstaining from meat two or three hours, you may add juice of apples, limons, oranges, ferrel, &c. or syrups; if you will have it purging add manna, &c. purging syrup, elect. or powders, &c.

A *Gelly* is a concrete substance of Broth, the fat being taken away; made of calves, or sheeps feet, the flesh boil'd from the bones, then strain'd; when 'tis cold, take off the fat, the remainder clarifie with the whites of Eggs, then to ℥i. of the Gelly, add ʒii. of Sugar, and ʒii. of Spices, as Mace, Cloves, Nutmegs; some add, to gratifie the palate, Syrup of Limons, Vinegar, Rose-water, and Ambar-grise, &c.

A *Bolus* is of the consistence of Honey, as much as the mouth can receive at once; 'tis purging or strengthning.

Purging is made of *Cass. extract. ʒi. Diaprun, ʒss, Elect. e suc. ros. ʒii. cum Sacchar. F. Bolus*, and such like, with *Crem Tartar*, or *Turpentine*, with *Elect. or Powders*, &c.

Strengthning is made of *Conserves ʒss. of Powder*, and strengthning *Opiats ʒi.*

*Of Elec̃uaries, Lobocho's, Pills, Troches, Pow-
ders, before.*

Gargarisms, are medicines held and agitated in the mouth for divers uses, as to purge the head, to appease pains of the throat and palate, and for their ulcers, &c. discufs and repel; made of waters and decoctions, according to the intent of the Artist, of lb i. of liquor, ʒ ii. of syrup, to ʒ iii. of Powders.

Apophlegmatisms, or Masticatories, are solid remedies held in the mouth, for the diseases of the head, teeth, and wind-pipe, and to draw phlegm from the head; the simples are put into a fine cloth, or reduc'd to Troches. They hurt Ulcers of the mouth, throat, inflammations of the lungs, and catarrhs; after using, wash the mouth with warm water, or ptisan, &c.

Errhina, with the *Greeks*, are things put into the nostrils, to purge the head; or for *Ozena's*, *Polypus*, *Hæmorrhage*, and their other diseases. They are either solid, made up with wax, honey, or terebinth; or humid of juices, as before; or their decoctions, adding Syrup, as *Oxym. scyl. mel anthos.* or *Pul. uphor. cartham. digryd.* &c. ʒß. may be drawn up, the mouth being full of water, lest they fall upon the Throat, the Head must be upright. When there is fear of blindness, or cata-

catara^{ct}, use them not; but they profit in con-
tumacious diseases of the brain, where the
smelling is prejudic'd, and deafness, but after
general remedies, &c.

Sternutatories, are stronger, and are call'd
Ptarmica by the *Greeks*, they help vapors
and mucous matter in the head, are made of
Powders.

The *Epithems*, Ancients call'd in general
whatsoever was outwardly applied to the
Body, now adayes they are appli'd to strengthen
then noble parts, as in malignant and burning
Fevers; if liquid, they are made of distilled
waters, fit juices, wine-vinegar, confections
strengthening Powders, to $\zeta ii.$ of Liquor, of
Powders, and Confections, $\zeta ii.$ they are
be appli'd warm, with a scarlet cloth, wrung
out; they ought not to be put cold to the
heart, in putrid Fevers, till after general Re-
medies, lest the transpiration of fuliginous
vapors be hindred, unless the heat and ma-
lignity of the Fever chiefly urge; for then
the Artist must wholly turn himself to
extinguish the heat. The same may be said
in coming forth of the Small-Pox and
Measles, for fear of striking them in; yet hot
ones may then be used. Some apply them to
the Stones, to cool the whole Body, stay Ha-
morrhage, but hot to excite Venery. The
solid are made of Conserves and Powders

in com manner of an Opiate, with fit liquor, or
here the Pidgeon cut in the middle, or a Lambs, or
out after Calves, or other young Animals lungs, sprink-
ing some $\zeta ii.$ of cordial Powder. In Eng-
e call and we apply them to the feet, to revel from
vapors the head, and noble parts.

made of Lotions are to heat, refrigerate, provoke
sleep, used to the feet, or the head; for the
general matter, they are made of proper simples, ad-
to the ting Spices, and sometimes Senna, Agaric,
streng. &c. and sometimes Sulphur, after universal
burning evacuations; then dry the head, and apply
di. medicinal Caps or Plasters, with ointments
ections as the distemper shall require; they are used
quor, of in tinea's, surfures, scurfs, scabs, and lice;
y are to they are hurtful in the beginning of catarrhs
wrung and pains.

to the Baths, and Semicups, are made of a large
ral Ro quantity of Roots, Herbs, and Flowers, more
iginous or less, according to the quality of water and
nd ma things to be boil'd.

or then Lixivia, are made of $\zeta iii.$ of wine, or wa-
self to ter, and ζi of ashes, and they are used in-
be said wardly too in Dropfies, and Stone, &c. of
x and Broom, Bean, Ash, Wine-stalk, Ashes, and
yet ha White-wine, adding Nutmeg, Cinamon,
hem to Mace, Cumin, Anise, Fenel-seeds, dulcified
y Ha with Sugar.

The Fomenta, or Fatus, are made of Oils when
wders you would mollifie; of Milk, &c. when to
leni-

lenifie; of *Lixivium's* of Wine, Brandy, *Oxyerate*, and divers decoctions, when would digest or dry, &c. they are to be appli'd often with soft flannel, or Scarlet Stuffs, or Sponges, &c. not long to be used, three or four dayes is enough; if longer, they induce weakness of the flesh and nerves, always anointing the part with some proper Oil or Unguent.

Embroche, is taken several ways, either for an instillation made of some liquor on a part, or for a gentle application of liquor, or friction with the hand, or the application of linnen cloths wet in that liquor; 'tis made of the decoction of divers things in proper liquor, for hot or cold diseases.

Of kin to these, is *Oxyrhodizon*, made of four or five parts of *Ol. Rosat.* & *Acet. Rosat.* part. 1. or sometimes juices, are added keeping the same doses, which is cooling, is not to be us'd when there is a catarrh, a cough, heaviness of the head, noting fullness of humors, or tension, which shews plenty of vapors, unless they be dry and bilious; moist are known by sleeping, and moisture at the nostrils, dry *e contra*.

Of Oyls, Balsams, Liniments, Unguents, Cats, Emplasters, and Sparadaaps, before.

Cat. plasma, is a medicine of the consistence of Puls; the crude is made of contused herbs,

herbs, with their juices and oils, adding meal
and proper Powders: the boil'd is made of
things till they tabescate, then pulp'd through
a Sieve, adding mucilages, meals, fats, oils,
and boiling them again to the thickness of
Puls. For the most part 'tis prescrib'd to be
made of the residue of the decoction for a
fistula; bruise'd in a mortar, pulp'd by a sieve, to
which of which add oils, or analogous to them,
mucilages, to ζ *iii, iv, v, vi*. yet 'tis often left
to the judgment of the Artist, of Powders,
Meals, to ζ *iii*. 'tis made sometimes of ripe
Fruits, or unripe bak'd under the embers,
adding proper Powders, as in Fluxes of the
Belly of Quinces, of the Stomach of Crusts of
Bread with astringents; or with Crums of
Bread, Milk, yelks of Eggs, Saffron and Oil,
in pains, or astringent Powders, with whites
of Eggs; of Crums of Bread moistned in
water, and Oil of Roses, is made an excellent
Cataplasme for Inflammations, or with Vine-
gar, and then 'tis more proper for *Erysipela's*;
and if you use Butter for Oil, 'tis more con-
cocting; with Pitch 'tis good against bruised
Nerves, and Gowt; with *Hydromel*, for the
Inflammations of the *Præcordia*; 'tis also
made of Brans boil'd in *Oxymel* for hard tu-
mors of the Liver and Spleen, and inflam'd
testes, venenate bitings, with *mulse*, without
vinegar to *furuncula* and *tubercula's*. Of fer-

ment with Oil good for hard tumors, to draw out things fixt in the Body; with vinegar for the humors of the Spleen. Of Figs bruised with *Ol. irin.* for indurated Nerves, contracted joints, hard tumors of the Liver and Spleen; add *Nitre*, and it breaks Apostems, draws out Stings, &c. 'tis good for Dropsies, much more if Cumin be added.

Phenigmi, are hot medicines, which drawing the tumors to the part, make it look red, whence it hath its name; the stronger exulcerate, they are hurtful to women, and effeminate Natures, Children, superficial diseases, to an immaterial cold distemper, for which only calefying things are fit, according to *Ætius*. Hence are various sorts of *Phenigmi*'s, differing only in efficacy, &c.

Psilothron, which takes hair away, also any absterging, discussing, resolving medicine. To take away hairs, add a little *Auripigmentum* to *Calx*; but to rubifie, *Pepper*, *Sal*, &c. 'Tis good against the *Elephantiasis*, *Podagra*, *fluxus muliebr*; if it lie long on, 'twill ulcerate.

Smegmata belong to the cosmetic part of medicine; but some are hot and dry, and remove outward distempers, made of salt water, ashe, spurnice, &c. are administered in the form of Sope, or Powders; but Friction is to precede: they are used in cutaneous distempers as *Lichenes*, *Psoa*, *Elephantiasis*, &c. For the

draw head Lotions are to precede, as in *tinea*, of the
negar, decoction of *Lupines*, *Barley*, *Bran*, &c. then
s brui rub it with Powder of *Nitre*, *Pumice*, &c ty'd
, con in Bags ; Sope is stronger, and is made of
er and Ashes, Sewet, Lie, with *Calx*, &c.

stems, *Dropax*, is also a depilatory medicine, 'tis
opies, stronger than *Psflothron*, and that depiles by
draw, extraction, this by corruption ; 'tis made in
k red, form of an Emplaster : the simple is call'd
r exul, *Piptosis*, or *Picatio*, because made of Pitch and
effem, Oil, and apply'd to the part, the hair being
iseases, shav'd off ; 'tis us'd in extenuation of the
which parts, for it humects and calesies, and draws
ing to blood to the part ; but in extenuation caused
benig by an ill concoction of the Stomach or Liver,
this helps not ; 'tis good also for oft vom-
ings, crudities, and cæliacal affections ; pull
lso any off before it be cold, and repeat it often, till
dicine the part look red ; instead of *Pix*, use *Galba-*
pigmentum and *Sagapen*. in hard Bodies. The com-
. This pound is made of *Piper*, *Pyrethrum*, *Sulphur*,
z. fluxu, *Sal*, *Euphorbium*, *Stercus Columbin*. with *Pix*
te. in form of an Emplaster ; it ought not to
part d exceed the third degree of heat, for its design
and re is only to rubifie ; Frictions, Fomenting, &c.
t water must precede, but use it not too long, lest
he form what's attracted be resolv'd.

to pre *Sinapismus*, is a Cataplasim of Mustard-
empers, seed and Figs, macerated in warm water, and
For the quised ; the gentler is made of one part of

Sinapis, and two of Figs; the mean of equal parts, the stronger of two parts of *Sinap.* and one of Figs; for Figs, some use hot Bread; Vinegar takes away the strength of *Sinapis*; 'tis us'd as *Dropax*: 'Tis good in *Chephalalgia's*, *Epilepsie*, pains in the Joints, Breast, Palsie, Distillations, Sciatica, shortness of Breath, and bad Appetite, from *Ætius*. Apply it not to cartilages and parts without flesh, as Ears and Nostrils: &c. The Compound is made thus:

Rx. *Empl. mucilag. or such like*, ℥ii. *Sinap. staphisag. sterc. columb. an.* ℥ss. *pulver. aromatic.* ℥ii. *in oleo irino.* F. *Empl. or with Terbinth. for the Synciput in form of T.* Goats dung for the Hip-gowt.

Vesicatorium, is made either in form of an Emplast. as Emplast. *Vesicator.* or Emplast. *mucilag.* ℥i. *Cantharidum* ℥ii. or like a Paste of ferment. ℥i. *Cantharid.* ℥ii. *malax'd in Brandy or Vinegar*; when it hath rais'd a blister, apply a colewort leaf a little dried; is used for the same purpose as *Synapism*.

It may also be proper in hot diseases; as,

1. In the declining of a disease; to discuss the relicks, so *Galen* in a Phrensie.

2. When the humor is fixt so, that it cannot otherwise be discuss'd, as in a false rheum.

3. If it be of a venene quality, as in Biting

and Stings, Carbuncles, and malignant Ulcers.

Cauteria, induce acrust by burning, they are actual or potential; the first is a hot Iron, by which means are Hæmorrhages staid, defluxions are intercepted, carious bones, malign ulcers are cured; the second are medicines for timorous persons, but Iron is safer; they are proper for Bubo's, Carbuncles, contumacious, phlegmatic diseases; they dry and strengthen moist parts, hinder the corruption of a gangren'd part, divert humors in divers diseases; hence they are apply'd to the thighs, arms, shoulders and head. The potential Cautery is made of strong *Lixivium* boil'd to the hardness of a Stone, then cut square, like ordinary Dice, and put into a narrow mouth'd Glas stopp'd from air; some add *Calx* to the *Lixivium*, or use this:

Rx. Lixivium ut supra q. s. to which add Calx, and Tartar calcin'd to a redness, of each three parts, Vitriol calcin'd to a redness two parts, Salis Armoniaci one part; boil them to the consumption of the moisture, and keep it as before.

Collyria, see before.

Dentifricia, call'd *Odontotrimmata*, are used to polish, deterge, and fasten the teeth, in diseases of the Gums; they are made of Coral, C.C. Egg-shells, or *sepia*, alumen, pumice, oris,

cinamon, *nitre*, *sal. dens equi*, &c. burnt or dried to Powder, of which you may (adding proper Liquors) make Lotions, or with Honey Liniments, or Powders alone to rub them with.

Sacculi, *Scuta*, *Cucupha*, are made of divers Powders, put in a Bag to discuss, strengthen, resolve, ease pains, winds, stays distillations, &c. For the Head, they are cold *Cucupha*; for the Stomach, *Scuta*; for the Heart, Liver, &c. they must imitate their form.

Frontale, is made either of dry Cephalics and Aromatics, to discuss; or of *Letice*, *Hyscyam*. four cold Seeds, &c. to procure sleep; or in form of a Liniment, or Pultis, as *ung. popul.* $\frac{3}{4}$ i, *ol. rosar. aut violat.* $\frac{3}{4}$ ss. *album ovi.* q. s. *parum aceti rosat.*

Suffitus, is a remedy from which smoke is drawn by the heat of fire, for divers purposes, as to strengthen the head, and other parts, stay defluxions in pestilent contagious obstructions, *asthma*, suppurations, pains of the sides, divers affections of the womb, to provoke sweat, and spitting; 'tis dry or moist: this is made of hot proper liquor, expiring vapors, as Vinegar, Wine, Brandy, &c. the dry is made of pinguous things sending forth a smell, as *Ladanum*, *Myrrhe*, *Mastix*, *Storax*, *Terebinth*, *Castor*, *Thus*, *Benjoin*, *Lig. Aloes*, *Cinnamon*, *Lavendul*, *Cloves*, *Spi. a*, *Ambar*, *Mosch*, &c.

which are cast upon Coals in Powder, or
 (ad. form'd into Troches with pinguous things, as
 with *Terebinth, &c.* use it not in spitting blood, nor
 o rub in dry diseases of the breast, they are oft pre-
 scrib'd in diseases of the womb, 5. *Aphorif.*
 28. *suffitus aromatum muliebria ducit*; when
 then, th' are obstructed by much and thick matter;
 rions, but they hurt when with child, and dry up
 e, for the tender *acetabula*, whence they become
 r, &c. barren.

Next the Artist is to know the use of the In-
 struments he is to keep alwayes in readinesf
 in his Closet or Chest; and first of the Crows-
 bills, Catch-bullets, and Terebellum.

THese Instruments are used severally, to
 draw out Bullets, Arrow-heads, broken
 Bones, pieces of Armor, or Mail, or whatso-
 ever else of unnatural things gotten into any
 part of mans body.

The Incision, or Probe-scissors, do dilate and
 enlarge the orifice of a wound or ulcer; for
 divers respects, better than the *Incision-*
knife.

The Dismembring-knife, is used in the fleshy
 parts to cut close to the bone, the better to
 make way for the Saw.

The Trasine, was first devised by Mr. John
 K. 4 Woodal,

Woodal, a very Learned man, and is of more use than the *Trapan*, as I have divers times experienced; and I use it according to his direction, which I shall rehearse in his own words mostly.

First, that the Pin thereunto belonging, be triangular and placed in the centre, and stand fast; also that it stand no lower, but alwayes somewhat higher than the circumferent teeth of the head of that Instrument do; because the said Pin guideth the circumferent Tooth-headed Saw to the beginning of the work, and in the agitating and moving the Trasine with the hand to and fro, the said Pin first takes hold, ere the teeth of the instrument touch the skull; for the Pin is not only appointed as a guide, but also as the stay to the work; which done, namely when the Tooth, Head, Orb, or Saw, hath taken round hold, then the Artift is to take up the instrument, wipe and cleanse the Teeth, and draw out the said Pin; then he is to pierce on, often taking it out, and dipping it in cold water, and cleansing it with a brush, (whereby he will shunn wounding the dura mater) till he have gone through the Cranium; then taking out his instrument, he shall find the piece of the Cranium fixed within it.

Further, he adviseth the young Artift to make tryal on a Calves head, or the like, before he put it in practice upon a man.

The Head-Saw, is to give a vent through the *Cranium*, and with it may be taken off a finger or toe, as occasion shall serve; and this rather than *cutting minets* or *chissels*, they being so apt to shatter the bones; but with this, if the member be stedfastly held, or bound to some piece of wood, it is taken off very cleanly.

The Dismembring-Saw, is used to saw off a bone of the Arm, Leg, or Thigh, after the flesh is cut from it by the *knife*, and the *periosteum* scraped away with the back thereof.

The Speculum Oris, is of two sorts, *i. e.* plain, which taketh hold under the chin, and holdeth the mouth open, and the tongue down, both at one time, and is very necessary in applying medicines to the root of the tongue, *uvula*, or roof of the mouth: or with a scrue, thereby by degrees to force, and wrest open the jaws in the Lethargy, Convulsions, &c. and many other dangerous Diseases, and for conveying nourishment into the mouth of the Patient.

Speculum Ani, the name declareth to what use it serveth, to open, as occasion shall be offered, as in excoriation, ulceration, fistula, &c. Here have a care not to force needless dilation, lest you bruise the sphincter muscle, which divers times will mightily resist the instrument,

strument, yea, and the Patients own will, then you are to desist.

Of Cauterizing Irons, before in Cauteries.

Forceps for Teeth, of several forms and sizes, and a punch to force out a stump of a hollow Tooth, which cannot be laid hold on by other instruments.

The small Syringe, though many pretend to have the true knowledge of its use, yet they fail grossly. You must have one for watry injections; another for oily; and in using it for the *Gonorrhœa*, let it first be delivered between *glans* and *præputium*, holding the last close together, to wash the passage; the next bout, take the yard in thy left hand about the middle, and then put in the Syringe so far as thou canst leisurely, then deliver the injection, holding thy left hand, so as it may not come out again, but be conveyed to the neck of the bladder, getting another to fill the Syringe again, and deliver that as the other, not removing thy hand, and then the water will go in to the bladder, and this way thou may'st inject as much water as thou wilt into the bladder. Let not the Medicines to be injected be too hot, nor too cold. The Syringe is not here limited, but is used in other parts, as in wounds, ulcers, and fistula's, which will be declared when we come to speak of their cure.

The Clyster Syringe, and Pot, are very necessary, with Pipes of several sizes; there is also belonging to this Instrument, a crooked neck like an elbow, that in what manner soever the Patient lie, the medicine may be administered to him, and therewith also one may give himself a Clyster. You must also have a Clyster-Pot with a Spout, the better to deliver into a Syringe the Liquor without a Funnel. If the medicine will not enter, then with *Spathula mundana*, draw out part of the Excrements, and then give your Clyster: moreover, many are so weak, that cannot retain the medicine; you shall then make use of some soft Clout, or Towe, to hold it in.

The Catheter, and searching Candles, are very necessary in obstructions in the passage of the urine, or neck of the bladder, which by a Syringe cannot be removed. When you use it, put it in gently, with the crooked part downward, so far as it will be put in, being first anointed with a little oil, then feel by the root of the yard near the *anus*, with the forefinger anointed, (or the middle finger of thy other hand) where the end of the *Catheter* resteth, or beareth out; then put in the *Catheter* yet further towards the *anus*, bearing down a little the lower part of the said Instrument with the upper hand, which stayeth the *Catheter*; then together with the help of the

the lower finger of the other hand, turn the *Catheter* upwards, putting it also forwards a little, and it will slip into the bladder; then draw out the wire within the instrument, and the urine will come forth; still keeping the instrument carefully within the bladder, till all be run out, that gently will come without forcing. Moreover, you may, by putting in the longest finger into the Patients fundament (the *Catheter* being in the bladder, and the water drawn out) feel easily if any Stone be in the bladder; the Party grieved standing, and bending his body likewise forward. Searching Candles of Wax will be also necessary in Caruncles, or Ulceration of the neck of the bladder, or passage of Urine, by them you shall find out where the grief is, and be able to convey apt medicines thereto. When by the Candle you have found the certain place of the grief, which you shall perceive, when you thrust the Candle into the Yard, by the Stops and Stays which it shall find in the said passage; be careful to observe the just length to the further end of the said Stop or Place agrieved; and there if you mark your Candle well, you shall perceive the full length and breadth of the disease; then upon the said Candle you shall fasten the medicine you intend for the grief; as if there be spungy flesh, a little *alumen ustum*, or *vitriolum ustum*,

&c. will be proper, which print it, according to the depressed part of the wax, into the candle, and conveigh it warily to the place, and let the candle remain in the yard, but have a care you keep it not in, till the wax melt too much; then draw it out, and arm it as before, and put it in again, and ever alter your medicine upon the searching candle, as you see cause; and forget not to use good injection also, which will help much.

Cupping-glasses of several sizes you shall find very useful, as to fasten upon a *Bubo* to bring it forward, &c. also to set upon the upper part of the shoulder blade, or on the thighs, for the cure of the *Sciatica*, &c. or to draw blood to a member wanting nourishment, and to attract humors to a place: also they are set with scarification to draw blood out of any member; then light your tow, clap it on, then press the skin with your finger close to the glass, and it will come off; then take a lancet, and lightly scarifie the place, and then set on your glass again, and draw as much blood as you shall think fit; then wash the place with fair water, and dry it with a sponge, and anoint it with a little fresh butter, and it will be whole; scarifie not too deep.

Blood Porrengers are necessary, thereby to know the quantity of blood let forth.

Spatula

Spatula Mundana I have used in extreme costiveness, when no purging medicine would do good; you may, if occasion offer, open the *anus* with a *speculum ani* first, but most commonly it is easily forced into the *anus* of it self, being anointed with grease, and so put up the spoons end, and therewith draw out the hard excrements.

The Dyet-Pot is made of copper or earth, and is to boil drinks of several sorts in.

Of Lancets, the Artift is to have alwayes a Case of good ones in his pocket. When you use them, you shall make a ligature about the arm, some three fingers breadth above the place you purpose to cut, in this manner: Take a Yard and half of your worsted Gartering, or Lint, or a Womans Fillet, put your bandage upon the arm, and turn the ends both round the arm, and meet-them together on the outside, so that it come twice about the arm, and then tie them on a single bow knot, which will easily be loosed upon occasion; then chafe well the vein, that it may rise full; make your orifice not deep, nor too large; when 'tis too small, 'twill presently swell: alwayes strike the vein a little cross, not just along, nor quite overthwart, but slanting. When you have well noted the place you intend to cut, you shall lay your thumb gently upon the vein just by that place, and with your

your Lancet in the other hand, as far as you shall think fit cut the vein, a little stretching up your hand, by the slackning your ligature the blood will stay; then with your fingers crush the blood out of the orifice, and lay on a pleget of lint dipped in cold water, and a linnen bolster upon that, both which ought to be laid in a readiness before the ligation be made, and then with the hand bind up the arm, going cross above and below the elbow, still making the band to cross upon the bolster, make it fast, not too hard, and so it must remain till the next day.

If the Patient feed in the bleeding, let him put his finger far into his mouth, and press down the root of his tongue, and force himself to keck, or throw cold water in his face, and lay him at full length; but if he swoond, then bow him forward, and clap your palm of your hand close upon his mouth, stopping his nose betwixt your finger and thumb.

If any come to thee to be let Blood, do it not without good advice of a Physician; and when thou goest according to his directions, whatsoever happens, thou shalt go blameless.

The Veins usually opened are these following.

The first in the Arm is called the *Cephalica*, or Head-vein, and lieth uppermost on the outside

outside of the Arm, without danger of either nerve or artery.

The next is the *Mediana*, or Common Vein, because 'tis most commonly opened. It is cut generally in any affect of the body; beware of pricking the nerve lying under it.

The third is the *Basilica*, *Epatica*, or Liver Vein, and lieth on the inside of the Arm, and hath an artery lying under it.

And because all Veins have the same original, therefore you shall bleed the most apparent, and free from danger.

The fourth is the Vein in the Forehead, in Phrensies, Pains, Rheums, &c.

The fifth is that under the tongue, in the Squinancy, inflammation and swelling of the Amygdals, or Almonds of the throat, Apostumes of the mouth or throat, or root of the tongue.

The sixth is the *Saphæna*, lying under the ankle, and is opened in warm water, chiefly to draw down Womens monthly visits.

The Artift fitted with these Instruments, shall keep them very clean, oiled, and rouled up in oily clouts, and when he hath used any of them, rub them very clean, and have also in readines these things following, viz.

Searces of Hair and Lawn, Splints, Tapes, Sponges, Rowlers, a Mortar and Pestle, Strainers, Juncks, Tow, Clouts, Thread and Needles, to make Roulers,

Thou

Thou hast all this while Reader been in the Theory, now in short of the *Præctick*, in the Cure of *Tumors*, *Wounds*, *Ulcers*, *Fractions* and *Dislocations*, wherein lies the most common and major part of thy Profession.

OF TUMORS,

And first in general.

A *Tumor* is a disease, wherein the parts recede from their natural habit in quantity, hindring their action. *Hippocrates* call'd it *Oedema*, from *Oedein*, to swell; the *Arabs*, *Apostema*.

The differences are from the four humors, or some solid matter, as in *Hernias*, &c. now *Tumors* are either natural or unnatural, simple or mixt; as from pure blood proceeds a *Phlegmon*, from impure a *Carbuncle*, *Furuncle*, *Phyma*, *Bubo*, &c. to *Oedema* are reduc'd *Wind* and *Water*, from pure *Choler* *Erysipelas*, if corrupted *Herpes*, &c. from *Melancholy* *Schyrrus*, from its Ulster, *Cancers*, *Leprosie*, &c.

The causes of *Tumors* in general, are *Congestion*, or *Fluxion*. The first is from the faculty ill concocting, or expelling; or if the excrements are thick, cold, or the wayes obstructed.

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structed. The second is, when the whole Body, or some part, being irritated by the quantitie or qualitie of humors, transmits them to another, as the Body to the *Glandules*, the principal parts to the *Emunctories*, the stronger to the weaker. To these add pain and heat, which properlie do not draw, but irritate the expulsive facultie; thin humors flow, thick congest. The special causes are either procatactic, as blows, falls, vehement motion, &c. which are rather occasions, than causes; or antecedent, as the four humors, before; which if they cannot be prevented, being shut up in some part, are called the con-junct, or continent cause.

The signs of outward *Tumors* are apparent to the sight. As for the Cure, they have four times; first the beginning, *i. e.* when the part begins to swell; or when the humor is yet crude, or some light symptoms appear; the increase is, when humors begin to concoct, symptoms grow greater; for till *Purification* is made, there are oftentimes great pains and fevers. The state is when the *Tumor* hath done increasing, the matter is concocted, the symptoms are very grievous: The declination is, when all is quiet. For their end, 'tis either by Resolution, which is best; or Maturation, which is next; or in Hardness, which is worse; or in Putrefaction, which is worst.

Now they are likeliest resolv'd when the matter is thin, maturated by Nature's getting the victorie, indurated either by the immoderate use of things resolving the thinner part, the thick remaining, or the too much use of coolers. Resolution is known by the lightness of the part, little pain and pulse. Maturation the contrarie; of a *Schyrrhus* the diminution with hardness; of Putrefaction a black and livid colour. Sometimes a *Tumor* vanishes, the humor falling upon some other part, then the *Tumor* is diminish'd, but yet bad symptoms remain.

These things being premis'd, you are to order your indications according to the times; first then the matter flowing is to be taken away, pain or heat that attract are to be assuag'd; if the part be weak, 'tis to be strengthened; then that which is confirm'd, is to be cur'd; if blood offend in quantitie, call'd *Plethora*, *Plebotomy* takes it away, if not much, Fasting, Watching, Friction, Exercise, &c. some of which are not so necessarie in the Fluxion, because they irritate it. Other humors that offend in qualitie too, call'd *Cachymia*, are evacuated by Purgation. Now these are administred either in the beginning or augment of *Tumors*, either for *Revulsion* or *Diversion* sake. In the state and declination evacuation is convenient from the part affected.

fected. Now *Revulsion* is an aversion of the flowing humors to a contrarie part, or to the nearest the original of the *Fluxion*, that they may cease to incommode the part affected. To perform which well, the Artist must know that it ought to be done,

1. According to rectitude (not mathematical, but medical) of the *fibres*, dispers'd to all oppositions, as above, below; before, behind; aight, and left; within, without; 5. *Aph. 58.* which *Galen* proposes *l. de Revulsione*: the last the *Arabians* omit in their doctrine of *Revulsion*.

2. By the parts most distant, which is when there is a verie great *Plethora* else by the nighest; as when we applie Emplastres to the head to revel a *Catarrh* from the breast, or sharp Clysters to prohibit humors ascending to the head.

3. To the original of the *Fluxion*, if it may be, but 'tis not alwayes necessarie, nor possible; yet it may be done according to all oppositions, as before. So the opening *Vena Frontis*, helps in pain of the hinder part of the head, though the original be not there: But if the original of the *Fluxion* be unknown, then we are to revel to the parts most distant, as if from a *Vertigo*, we fear an *Epilepsie* may succeed, *Canteries* may be profitablie appli'd to the thighs, &c. or a vein open'd in the lower

lower part; but that vein is alwayes to be open'd, which hath the nigheft communication with the part affected: as in the Pleuritic we let blood in the fame fide, becaufe of the higher communion of veins; but the thigh, being affected, we cut the oppofite vein, by reason of the communication from the fame *Vena Cava*.

4. By the common veffels, which are not onlie the *Veins*, but the *Arteries*, *Inteftines*, *Ureters*: For the whole body is confluable and perfpirable, and is made of an unfeearchable harmonie, as divine *Hippocrates* hath left recorded. Sometimes by hidden and unknown wayes to us, though not to nature; and which cannot be known by skilfulleft Anatomifts, and in dead Carcaffes they appear not.

Here note, that *Attraction* is rather an *Aversion*, than a *Revulfion*, and fo is not its true *Genus* as fome think; for 'tis perform'd oftentimes by *Expulfion*, as when 'tis caus'd by force of Medicine, *Cauteries*, or *Vacuum*, which becaufe *non datur* it hath no pofitive qualities, yet *Veficatories* draw. Again, *Revulfion* is not onlie convenient in humors that are flowing, but thofe that are apt to flow, and that are influx'd, if they be but apt for motion, and may be averted to a contrarie part, as *Galen* cur'd an inflammation of the eyes in
one

one day by Purging. In *Derivation*, humors that have flowed, may be derived to other parts, *ergo* they may be mov'd; if they may be mov'd, they may be revel'd. Now

Derivation is an aversion of humors, by the neighbor parts, and hath respect to humors not yet impacted, but onlie quiet; for the Impact is to be dealt with by Topics, not to be order'd in the beginning, but augment of Tumors.

Thus having, I hope, made plain to you the doctrine of *Revulsion* and *Derivation*, you are not to forget in the mean while to apply to the part some repelling Medicines, as *Ovi Album*, *cum Ol. Rosar.* wash'd well in Plantan, or such like Water, and *Bol. Ung. Alb.* &c. having a great care of using these too much, lest *Schyrrhus*, or *Gangrene* supervene. They are hurtful likewise,

1. If the Tumor be in the Emunctories.
2. If it be venomous.
3. If it be nigh a noble part.
4. If the Fluxion be critical.
5. If from an outward cause, yet Repellers are used in small bruises.
6. If it be in a *cacochymic* or weak body, whence Scabs, Small-pox, &c. are not to be repell'd.
7. If there be great pain, Repellers will augment it. In Congestion there is no place

Repellers. Aqueous things repel weak-
drie ones are stronger; they are to be
in a hot air, great tumor, valid age, and
of body; broad veins, in a declining
part: gentler are for a cold air, small tumor,
childhood, and women; narrow veins, upper
part, they are often to be renew'd. If by
these means the *Tumor* cannot be hindred,
you must use Resolvers, but in the augment
let them be more sparinglie mixt with Repel-
lers. In the state let their quantitie be equal,
which must also be anodine, because pain then
chiefly urges. In the declination, let them
be altogether Resolvers. If it cannot be dis-
solv'd, Suppuration is to be procur'd with
hot and moist Peptics, and Emplastics; for
these prohibit the dissipating of the spirits.
When being made, the *Tumor* is to be open'd,
either by a potential, or actual Cauterie, or
Incision Knife.

1. In the declining part.
2. According to the *ruga's* of the skin.
3. Taking heed of the veins, arteries,
nerves.
4. That the humor be not evacuated all at
once, for washing the spirits; then it must
be mundifi'd, incarn'd, consolidated, as you
shall be taught: And likewise for the sym-
ptoms, as Hemoraige, Pain, Syncope, &c. In
malignant Tumors, as pestilential and vene-
real

real *Bubo's*, *Parotides*, &c. you are not to attend perfect Suppuration.

Now of the four cardinal, or principal Tumors in particular, to which the rest may be reduced, and first of

P H L E G M O N:

IT signifies any Inflammation in general even without matter, but here we use it for a *Tumor* from pure blood; which shut up in the *Tumor*, and so depriv'd of its natural circulation, will putrifie, if not prevented.

Sic vitium capiunt ni moveantur aqua.

And if another humor be mixt with it, then is caus'd a *Phlegmone Erysipeladodes*, or *Oedematodes*, or *Schyrrodes*. So of others, it affects the *Arteries*, *Veins*, *Nerves*, *Ligaments*, *Muscles*, *Flesh*, *Skin*, and the *Bones*, and *Viscera*. Its Causes before. Signs are a Swelling, Redness, Heat, Shining, pulsific pain, unless it be far from an Arterie; a Fever succeeds a great one, or if it be in a verie sensible and nervous part; dangerous if great, or in an inward noble part, of exquisite sence, in the *Emunctories*; If it return from without inward evil, 6. Aphor. 25. the contrarie

to the Body neither *plethoric*, nor *cachymic*.

The Cure is in greatest part laid down before; as by Venesection and Purgation, Clysters cool, altering things; sleep cools, watching heats the Body; if Blood cannot be taken, use Cupping, with Scarification; then use *Repellers*, after *Resolvers*, and if they avail not, you must go to *Suppurators*; then open'd and cur'd as before. To *Phlegmon* are reserr'd,

1. *Furunculus*, which is a sharp Tubercle, of the bigness of a Doves Egg.

2. *Phygethon*, broad, and participating of an *Erysipelas*; for the most part bred in the *Glandules*, after Pains or Fevers.

3. *Bubo*, not much different from the former, but chieflie in the groins, whence called; of which there are three sorts, *venereal*, which arise in the *Glandules* above the groin; *pestiferial*, in those beneath; and *common*, in those a little above.

4. *Phyma*, which is also a Tumor of the *Glandules*, but less.

5. *Epiniëtis*, so call'd, because 'tis most troublesome in the night, it's a pustule resembling a scab, its color sometimes red, sometimes white, having a red crown with great pain, and at length ulcerates.

6. *Terminthus*, is like the former, having a black pustule above and below.

7. *Anthrax*, in Latine, *Carbunculus*, *Ignis Sacer*, is a burning pustule with a bladder.

8. *Gangræna*, is a mortification of the part, if the bones, 'tis call'd *Sphacelus*. In the beginning, there is some hope of cure in a strong Body; if it be in a part which cannot be amputated, as the breast or groin, &c. 'tis deadlie; let his diet be cool and thin, &c. Venesection and Purgation, according to the nature of your Patient; cooling Cordials, with a little *Theriac*, &c. Scarifie the part, and wash it with Vinegar, or Water and Salt; then *farin. orobi, fabar, &c. cum Ægyptiac*. If putrefaction increase, separate it from the sound, by actual or potential cauterie, applying a defensive to the sound part; take away the *Eschar* with *Ung. Basil. &c mundific* with *mel, vitel. ovor. far. bord. myrrbe, &c* if it proceed from cold, use hot fomentations, &c. which is derided in cold Northern Climates, where they foment with Snow, and rub therewith, the outward use of hot things being deadly; and we must believe them. If from strait ligature, loose it, and scarrifie, as before. If from a great bruise, dilaceration of the vessels, amputate it; so if there be no vanquishing the putrefaction,

Ense recidenda est ne pars sincera trabatur.

Leave nothing that's putrifi'd, neither cut in a joint, but below, unless it be in the foot, then amputate below the knee; first purge, if you have time; then draw the sound flesh upward, tie it strait, about a fingers breadth, above the part corrupted, then cut the flesh to the bone, scraping away the *periostum*, then saw off the bone. Hæmorrhage to be stay'd by Cauterie, and Astringent Pouders, and artificiallie bound up for 2 or 3 dayes; then if it sticks, moisten with red Wine, remove the *Eschar* as before.

Now the Cure of those Tumors under *Phlegmone*, and so of the other three, are easily perform'd, the Cure of the principal being well understood; for *propter unumquodque tale, & illud magis tale*; so that I have been, and shall be shorter about them.

Erysipelas possesses the cuticular parts, as *Phlegmone* the fleshie; 'tis of a red color, tending to citrine; touch'd, vanishes, and returns; pain more pricking than in *Phlegmone*, but swelling and beating less. Bad where the Bone is bare, or where it suppurates; in or about principal parts, in the face or neck, because of a *Phrensie* or *Quinsie*; 'tis bad to go inward, or upon Wounds, Ulcers, Fractures,

&c. or if it grow black. Diet cool and thinner; *Phlebotomy*, *Purging*, &c. less than in *Phlegmone*. *Topicks* cold and moist; forbear when it changes its color: oft to be renew'd; use no fat or oleous ones. *Avicen* praises cold Water. *Galen*, Juices of Nightshade, Porcelane, Housleek, Letuce, with a little Vinegar; in extreme pain, add Hemlock, Henbane, Mandrake, Poppie, &c. *Ful*lers-earth, or *Ceruss* with Vinegar are good; the rest is performed, by observing what hath been said before; under this are ranked,

1. Virulent, corroding pustules, from *Herpes* to the *Cancer*: Now there are several species of *Herpes*, wanting names, but two chieflie to be consider'd, *miliaris*, because it contains within a matter like *miliun*, and is superficial; *exedens* from thicker choler, ulcerating the skin; they degenerate into *Furmica*, and that to *Cancer*. Diet, preparing the antecedent cause, as in *Erysip.* the conjunction, not, for your *Topics* must be drying, as *Pomegranate flowers*, and rinds, *ung. alb. diapomph.* &c. the rest as before.

2. *Impetigo*, or *Lichen*, is accompanied with great itching, ends in a scalie moist, sometimes drie Ulcer; *Topics* must be drying and deterging; if it be Leprous, use *Mercury*.

3. *Phlyctæna*, like bladders in burns, full of

of Yellow Water, Topics cold and dry,
&c.

Oedema was a general name ancientlie for all Tumors, but now 'tis the name only of that caus'd of that part of blood call'd *phlegm*; 'tis *white, soft, lax, indolent, cold*; it happens to *lax* and declining parts, as hands and feet, far from the fountain of heat; if you press it, the print remains; it ends in resolution or nodes: common to old Men, and Gluttons, in Winter. Diet and Air must be thin, and hot, *&c.* and all things contrarie to *Phlegmon*, and *Erysipela's*. Motion is good, in the contrary parts. Topics repelling, binding, drying, but not cooling. *Avicen* uses *Vinegar* with *Borax*, *lixivium*. *Galen* in the beginning uses a new Sponge dipt in *warm Oxybate*; then *nitre* and *aphronitre* with *lixivium*, and *alum*, if need be, with strait ligature, beginning from the lower part, less vinegar to nervous parts, *aq. calcis* is good. In the augment stronger, then attenuaters and resolvers, for it rarelie ends in suppuration; if it do, expect not that it open of it self; but having artificiallie open'd it, proceed as hereafter in Wounds and Ulcers.

To this may be reduc'd,

1. *Emphysema*, or a *windy Tumor*, bred within the cavities of some part, as the Stomach, or in the muscles, resists the touch,

(whence it differs from *Oedema*) sounds like a bladder, shining. Here *Phlebotomy* is us'd, onlie to give breath to the wind included; purging Topics, &c. as in *Oedema*: before you applie Topics, anoint the part with some *chalastic oil*. *Fotus* of attenuaters, with *emp. bac. laur.* and *cupping*, are good; some use *calx viv.* boil'd in Wine; others add *stercor. columb. sinapis*, &c.

2. *A watry Tumor* is without pain, from a serous humor; in the skin 'tis call'd *hydra*, in the head *hydrocephalos*, in the cod *hydrocele*, &c. the natural heat is weaker than in *emphysema*, yet for the most part wind and water go together. It resists less, shines little, sound as of floating; if the *serum* be salt, it itches. Topics as in *Oedem.* and *Wind*, adding *aphronitre, alum, sulphur*; the following is stronger, *Rx. sem. sinap. urtic. sulph. spuma maris, aristoloch. bdel. ammon. in aceto dissolut. an. ℥iii. ol. antiq. ceræ, an. q.s.F. Empl.* which, saith my Author, resolves Winds, Waters, *Scrophula's*, and all hardness, within a Week; *aque thermales* are also profitable; if nothing avail, open it, and cure as an ulcer.

3. *Glandula*, soft and moveable, intire, mostlie in the Emuctories.

4. *Struma*, is harder, manifold, fixt, oftneft generated in the neck.

5. *Ganglion*, bred about the nerves, and articles;

articles; 'tis indeed a concretion of the nerves, by a blow or labor, small, the skin color'd, hard, indolent, if press'd, a numbness is perceiv'd.

6. *Lupia*, round, soft, bred most in joints and drie parts.

7. *Nodus*, round, hard, possesses the nervous parts.

8. *Testudo*, a great Tumor full of melleous humor.

9. *Talpa*, or *Topinaria*, is a species of the former, in the head.

10. *Natta*, a great Tumor like a Cucumber, &c.

11. *Atheroma*, contains a humor like *Puls*.

12. *Steatoma*, like sewet.

13. *Meliceris*, like honey.

As to the last three, note that they often contain all kind of matter aforesaid, and sometimes stones, bones, hairs, &c. and have all a *cystis*, and increase by degrees; and *Atheroma* is longish, if prest returns slowlie; *Meliceris* is rounder, yields easilie, and quicklie returns; *Steatoma* safer than the rest, and hath a large *Basis*; yet *Atheroma* may be suppurated, *Meliceris* resolv'd, but *Steatoma*, only cur'd by Chyrurgery.

As for others, the loose have a *cystis*, the fixt none; the new and soft may be resolv'd, the hard and inveterate not; painful and red,

224 *V A D E M E C U M*: Or,
portend a putredness, fistula, cancer: diet, &c.
as in *Oedema*.

In the Cure of these observe,

1. If the excrescences be small, soft, *cystis* thin, tare them away with the fingers, or instrument, as *Guido*. Prince of Chyrurgions, counsels; then dried with a Plate of Lead, or *ung. & plumbo usto, fuligine cum ol. & aceto*.

2. The moveable that will not yield to Medicines are to be open'd, the *cystis* taken away, having alwayes a care of veins, &c. as in the head, belly, &c. make your incision long, or across, then warilie separate the Tumor, for breaking the *cystis*, either with fingers or *spatula*, and draw it out; if any remain, absume it with *septics*, or *caustics*.

3. Those that have a small root, are to be tied strait, with hairs, or silk, &c. till they fall off.

4. Those that have a broad basis, and fixt, are to be eaten away by caustic, and then cur'd as ulcers, applying cool defensives about the part.

Schyrrus is a hard, livid, indolent Tumor, caus'd of melancholie, hard phlegm, or both: if from unnatural, or mixt humors, it hath sense, and is curable, the other hardlie; seldom possesses rare and soft parts, as the lungs, often hard, as tendons, ligaments, &c. liver, spleen;

Spleen; that which is hard by driness, scarce admits a cure; very apt to degenerate into a Cancer, Diet, Preparation, &c. moderately hot and moist: If blood abound, and wonted evacuations suppress, procure them by *Phlebotomy*, *Leeches*, &c. preparing and purging with *Melanogogues*. Topics are here warilie to be us'd, for there's danger of inhardening from too much Resolvers, and corruption from too great Softners, whereby it cancres; therefore Emollients are to be mixt with Resolvers. Hardness proceeds from Repletion, as in *ascite*, *tympanite*; or from coldness, as in Ice; or from exiccation as in the joints: The first requires Evacuators. the second Calefiers, the third Mollifiers: If from coldness and driness together, Calefiers and Mollifiers: If from cold and repletion, Calefiers and Evacuators. The Tumor softned, you may use vinegar warilie; because though it resolve, it hurts the nerves. *Galen* us'd *foetus*, and fumes of vinegar, made hot with spirits; then return to Emollients.

To this is reduc'd, 1. *Cancer*, a round, hard, malignant Tumor, of a duskie color, painful, burning with swollen veins about it; beginning from the bigness of a Bean, but hugelie increases, especially if irritated by hot things; possesses *Glandules* and *Dugs* softest; chiefly after suppression of months

and hæmorrhoids, 'tis a particular Elephantiasis: If confirm'd, 'tis not cur'd but by excision, better leave it, than attempt the Cure. 6. Aph 38. unless you cut up by the Roots, 'tis in vain, for 'twill not be cicatrized. Diet cool and moist, Phlebotomy altering, purging melanch. humors, are oft to be repeated. Fontanella's in fit places are good. Topics must refrigerate, as *suc. solan. cum Tutia*, for sharp ones accelerate an Ulcer. *Lytharge, ceruss. cum ol. ros.* were sufficient to Galen. Avicenna praises Water Crabs with brass oar. To either add *suc. semperviv. plantag. symphy. burs. pastor. acetos. lactuc. portulac. polygon. &c. mucilag. psyllii*; some add *papav. hyosc. mandrag. &c.*

2. *Verruca*, like hillocks in the body; some are called *myrmecia*, because by scratching them, 'tis like the biting of Ants; they have a broad basis. *Acrochordones* a narrow hanging one. *Thymi* resemble the flower of the herb, have a narrow basis, but sharp, reddish, hard, with a broad head; increasing, they are call'd *Ficus*; they chiefly infest the hands, feet, thighs, anus and privities. Many things are laid down for their Cure by Authors, as *Elater cum sale*; *suc. tithymal. sublimat. sulph. viv. stercora avium, ovium columbar. caprar. cum aceto. ol. vitriol. aq. fortis*, which last, all other failing, the learned Dr. Primrose says, cur'd

myrmecia

myrmecia in his hands, when a Boy. Excision, where it may be, is safer than the actual or potential Cautery. Bind those strait that hang down, till they fall off. In *Galen's* time they tore them out with their teeth.

3. *Varices*, are veins dilated with melancholy, flatulent, sometimes pure, or pituitous blood, *cap. 4. de atra bile*; ofttest in *scroto*, thighs, leg, sometimes by too long standing: hence *Varicosus Auruspex*, *Juvenal*. They profit in melancholy diseases, *Aph. 2. l. 6*. suppress, they cause them, therefore hardly cur'd in those troubled with the spleen. After general remedies and preparations, cur'd as *Aneurisma*, but Incision wants not danger, lest the suppress'd melancholy blood should fall upon the *viscera*.

Aneurisma is a soft, lax Tumor, caus'd from a dilatation of the artery by its blood; some say ruption, the skin remaining whole, but then the blood would putrifie, &c. 'Tis familiar to the breast, throat, groins, Women with child, because of the compression of spirits; also a wound of the artery, whether illy clos'd, or one coat hurt. 'Tis indolent, with troublesome pulsation, being press'd goes inward, which it would not do, if the blood was extravasated: neither doth it beat in great dilatations; here's fear of a Gangrene. If inward, 'tis not to be cur'd, nor where
Chy-

Chyrurgery cannot be perform'd, as the throat, &c. but you must use a cool diet, astringents with compression and strict binding, or a plate of Lead, &c. If these fail, tie the ends of the artery, and cut it in the middle.

Thou may'st expect, perhaps, Reader that I should have said something of the doctrine of the *Chymists* concerning Tumors; but the smallness of this Volume will not permit: Moreover, when I consider what our famous *Dr. Read* hath left to the young Artist about it, I think it may suffice; for he tells you, *Their doctrine is full of difficulties, which they make more obscure by coining strange words; so that 'tis but a kind of canting Philosophy: And calls it the Carbonary Cure of unlearned Alchymists; and if any one will mispend good hours, let him read Paracelsus's great and little Chyrurgery, says he, which are like Clouds without Rain.* Thus that Learned Doctor.

Of Wounds, and first in general.

A Wound is a solution of continuity, from an outward cause; in the flesh, the *Greeks* call'd it *trauma*, in a bone *catagma*, in a nerve *spasma*, in a ligament *apospasma*, in a muscle *rhagma*, in a vessel *thlasma*, *Gal. method. medend.*

deud. lib. 4. The differences in their places, Causes, any thing that may separate the harmonious œconomy of humane nature, as a sword, dart, bullet, bite, overstretching, fire, &c.

The diagnostic Signs are apparent. As to the Prognostic,

1. Great Wounds are dangerous, by reason of the excellency of the part, malignity or magnitude of the Wound; yet a small Wound illy handled, may prove mortal

2. If the bladder, brain, heart, midrif, liver, small guts, stomach, be wounded deadly, *Aphor. 18. lib.* because of their necessity, viz. if they be great, for a small particle of the brain lost, the Wound hath been cur'd; so in the substance of the liver; so in the fleshy part of the midrif, bladder, (as in extracting the stone) stomach. But Wounds penetrating the heart, brain, are mortal. because of continual motion, and loss of spirits; yet *Galen* upon this *Aphorism*, sayes he saw at *Smyrna*, a Wound penetrating the brain cur'd, but adds, 'twas Gods will. Also of the midrif, and lungs, for their motion and remedies not touching them. The same of the cartilaginous parts of the wind-pipe, because bloodless, and alwayes breathing; the *Wezan*, for the frequent passage of meat and drink; the great veins and arterics, for effusion.

sion of blood; the reins, because they are the sink of bad humors and remedies, come not to them but by divers *meanders*. The spleen not so dangerous.

3. Wounds of the joints, and those in the end of muscles, ligaments of the temples, because nervous, whence follows death of the whole, or part, or loss of motion, because of convulsion, and such bad symptoms; but if tumors appear there is least danger, because they avert the humor from the brain.

4. In very scorbutic; cacochymic bodies difficult. The Spring better than Winter, for cold hurts, 5. *Aphor.* 20. by hardning the skin, hindering suppuration, causing feverish shiverings, spasms. Heat contrary, yet too much hurts; better in young, than old.

5. A bruise worse than a cut, *ceteris paribus*; a great cut worse than a small bruise.

6 Spermatic parts are united by the second intention, as a bone prepuce, &c. by a *callos*, cicatrice, and so more difficult than sanguine, as the flesh, &c. which unite by the first; yet veins and arteries being soft in children, may consolidate.

Now the general intention of curing is *union*, which *lippis & tonscribis notum*; but how 'tis perform'd, *hic labor, hoc opus*; for *natura est morborum medicatrix*, the Artist is but nature's Minister, who, to perform his part

s. a. citò tutò & jucundè, (wherein lies his glory) makes use of five subalterne Indications.

The first is to remove extraneous and heterogeneous bodies; either with the organ of organs the hand, or other instrument; if the wound be too strait, 'tis to be enlarg'd safely; put the Patient in the same posture he was wounded, to draw forth the Weapon the same way if possible, if not the opposite; if neither, for sometimes

Agrius adimitur quam non admittitur hostis,

leave it to Nature. Some believe Medicines draw, of which before; but trust them not much, neither those of the Loadstone and Ambar; for these poudred, lose their attractive virtue.

The second is to join the separate parts as gently as possible; if they be rigid by cold, foment them with a mollifying decoction; which avails little, unless by

The third Intention he conserve them so join'd by ligature, or future; the first hath three sorts:

First, *The Retaining*; for parts that admit of no other, as in the neck, belly, and painful tumors, &c. 'tis done with a rowler of one or more heads, beginning at the part affected,

affected, and sowing it on the opposite Here you may see, according to Divine *Hippocrates*, Some Bandages are Remedies themselves, others subservient to Remedies; of the last kind is this, the following of the other.

Secondly, The *incarning* or *glutinating* for fractures and fresh wounds, not deep, or transverse, but long; 'tis perform'd by a rowler folded on both sides to the middle, beginning at the opposite part, bringing one head upwards, the other downwards cross wayes, to be straiter upon the wound than other parts.

Thirdly, The *expelling*, for deep, hollow wounds, to press humors from the bottom to the orifice, and prohibit influx of humors; it reaches from the lower part of the Wound, to the upper, where it's to be laxer, unless it be to prevent fluxion, then straiter. This operation is of so great use in Chyrurgery, that there is not any thing of consequence to be done without it; and in the Cure of Wounds so great, that some Years since, among others, *Septalius*, a famous Physician, practising at *Milan* 40 or 50 Years, writing learned Books; and *Magatus*, a famous Professor in the University of *Ferrara*, condemned the use of tents, and gives almost all the effect and glory of the Cure to Bands and Bandages, helping to maintain, with Emplasters,

plasters, the natural heat, on which depend
(say they) the whole Cure.

If any shall object, that this operation is
not observ'd in the Cure by the Weapon
Salve, attributed to *Paracelsus*.

I answer, the use thereof hath been con-
demned by reasons of the most sound The-
ology and Physic, and the Author noted for
impiety and *magic*; so I would not have thee
to trouble thy self about it: and the great
Senertus hath learnedly refuted its use. The
same may be said of the Sympathetic Pow-
der.

Suture is threefold too:

First, Incarning is for all Wounds where
deligation is not sufficient; 'tis done either
by a thred rub'd with white Wax, drawn
first through the middle, then on both sides
the Wound; or by leaving Needles with
thred twin'd about them till consolidation; or
by cloths, call'd the dry stich, where a defor-
mity is fear'd. Take two pieces of cloth
folded, triangular, or quadrangular, accord-
ing to the fashion of the Wound, dip them in
agglutinating Medicines, of *sang. drac. mastic.*
ichthyocolla. sarcocol. gum. arab. trag. &c. cum
alb. ovi. apply them to both sides a fingers
distance, when they are dry sowe them
close.

2. Retaining is the Skinners stich, for the
veins

veins and guts ; suspicious, because one stick broken, the rest are lax'd.

Thirdly, Conserving differs not from the rest, only laxer for torn Wounds with loss of substance. Stich not before pain and tumor be abated, or in bruises, or bites of venomous beasts, or if alter'd by the air, narrow and deep, or where the bone is bare or broken.

Here may be said something,

1. Of *Bolsters*, made of linnen, cotton, &c. doubled, sometimes dry, sometimes moistned in *oxycrate*, *wine*, *oil*, &c. to imbibed *Ichors*, conserve heat, or ease hardness of bands.

2. *Plegets*, *Tents*, &c. to mundifie or incarnate, made of lint ; if to keep open, of lead, &c. to dilate, of sponge, elder, pitch, &c.

The 4th Intention is to conserve the parts temper, which is done,

1. By convenient *Dyet*, thin till the 7th day, observing custom in what may be, for 'tis not easily alter'd on a sudden ; much loss of blood, requires more nourishing ; sleep long, if much pain ; troubles of the mind, and coition hurt.

2. *Phlebotomy*, unless a great Hæmorrhage preceded

3. *Purgations*, *Clysters* evacuate, reveal, dry, as before.

4. *Topics*,

4. *Topics*, to be repelling; dryer in a dry part: in a small Wound, moist part, hot time and region, milder, & *contra* stronger, apply'd
album.ovi, & hares furr.

5. *Glutinaters*, of which before.

Here comes in the use of,

1. *Vulnerary Potions*, which are not proper in fresh Wounds, because, as commonly set down, are too hot; in old ones, ulcers, &c. they may.

2. Of *Balsams* before; and that incompatible liniment of *Arceus*, never enough to be extoll'd.

The 5th Intention is the correcting of *Symptoms*, which hinder healing. *Pain* appeas'd by *Anodynes* or *Narcotics*, before; *Tumor*, before. Hot, cold, dry, moist intemperature of the part cur'd by its contrary, as before. *Convulsion* in Wounds of the Nerves. *Syncope*, *Delirium*, *Vigiliae*, in their places. *Pruritus* comes from sharp humors, *Excoriation* from scratching, sometimes inflammation; foment of salt water warm, *ung. de Cernuss.* *alb. popul.* &c. are good.

A Wound in the flesh is simple, or with loss of substance, superficial or deep; in the first, observing the premises, if blood flow too much stop it, else 'tis good.

A hollow Wound, or with loss of substance,

stance, is not only to be united, but incarn'd the two excrements thin *sanies*, thick *ford* mundifi'd and dry'd : Astringents, detaining the excrements, hurt ; detergers 1 degr. dryer than the part ; hot require hotter, &c. so moist parts *Thus* generates flesh, and dries ; dry, moistens and suppurates. Weak *sarcotics* beget plenty of *sanies*, soft flesh, strong *contra*: reduce the nigh part to the same temper, regard contrary Indications, as if the Patient be of moist nature, the Wound in a dry part, and *contra* ; the Medicine must be drying 2, 3 degr. so of age, time of the Year, region, &c.

The Wound fill'd with flesh, is to be skinn'd, which is Nature's work yet imitated by *sarcotics* of 1. Glutinners. 2. Or Cicatrizers of 3d degr.

If by neglect, or too long use of *Sarcotics*, omitting *Epulotics*, there be *Hypersarcosis*, which is a solution of continuity complicated with increase of magnitude, remove it by dryers in 4 degr. not so in themselves, but to the part ; which observe in other cases.

In a bruised Wound, is *dilaceration*, tumour, livid colour. *Universals* premis'd as in *Revulsion*, apply to the part *lenients* and *moisturants*, to the Wound *digestives*, &c. if necessity for *suture*, let it be lax. *Echymosis* or a contusion without a Wound, is a deep laceration

in musculous flesh ; *Subcuticular*, effusi-
of blood, *livor*, *dolor*, following : if great,
Gangrene's in danger. Universals pre-
s'd, appease pain, defend the part, bind
it; after if the humor be thin, resolve; if it
cannot be resolv'd, use cupping with scarifi-
cation, or if need suppuration, open and cure
it. inwardly are wont to be given things to
dissolve blood, of *rhabarb*, *mummy*, &c. in
wine, oxymel, syr. limon, acetos. &c. if need
be, wrap the body in a sheeps skin, newly
kill'd, anointing with resolving unguents.

In venomous Wounds use not dryers, re-
pellers, but drawers, mundifiers, as cups cau-
teries, &c. beware of sleep ; Animals cut in
the middle, both draw the venom and ease
the pain ; if the part be ignoble and dangerous,
cut it off.

If the veins or arteries be wounded, much
blood flows, and so *syncope*, &c. at last death.
Arteries leap. Revel, thicken with Medica-
ments, and Aliments, stupifie and cool inward
and outward ; use the skimmers stich, if no loss
of substance, with astringents ; or cut the vein
transverse, or take the artery with your for-
ceps and tie it, using *sarcotics*, let it untie of
it self ; or by actual or potential cautery, more
proper in corrosion ; procure not the fall of
the Eschar. Or make a *thrombus*, by putting
your finger to the vessel ; then cure *s. a.* note

an artery requires stronger medicines than vein.

Nerves are wounded by puncture, scissure, contusion; a puncture, is close, or open, scissure, long or transverse; signs are hurt of sense and motion, convulsion, &c. not if the whole Nerve be cut, nay, it may sometimes be divided to prevent danger, for better *Decius* perish than all *Rome*, but in a puncture because *fordes* cannot evacuate. Good if a tumor appear, ill if it go in, or appear not. 5. *Aphor.* 65, 66. if soft, good; hard and crude, bad; ligaments and tendons are less dangerous; to which agree dryer medicines, chiefly if they issue from bones. Here pain is chiefly to be regarded, Union not needful in a puncture; cut a vein, and purge, though no *plethora*; if a spasm happen, anoint the head, neck, back, &c. *ol. lilior.* &c. in tumors use not maturants, because they putrifie the nerves; to the Wound use *ol. terebinth. sabini. hyperic. comp.* &c.

A Nerve cut, if much, stich the lips of the Wound, using universals as before, keeping in the lower part a tent of digestives, not *sarcotics*, till danger of spasm, and inflammation be past.

If a Nerve be bare, abstain from *Euphorbium*, &c. applying dryers without sharpness, unless the Wound be very putrid; apply them not

not with water and oil, because that corrupts; this weakens Nerves if bare: otherwise if cover'd.

A bruis'd Nerve needs dryers and binders, never omitting preparations of *terebinth*; in all concerns of the Nerves, some add *sal. mel.* *Myrrhur*; in contorsions only emollients fit.

A Wound in a bone differs from a fracture, because this is without incision; 'tis united by the second Intention. *Erysipela's*, or cold upon a naked bone, ill; great bones cut, that the marrow flow out, dangerous, for fear of a Gangrene; draw not away the fragments suddenly, but assist Nature by attracters, then close stitching, very strait bandage, with universals in the declining part leave a tent of *mel. rosat. terebinth, myrrhe*, upon it astringents, *cum alb. ovi*, then as in Nerves. *Callus* elsewhere in Fractures.

The Head may be cut or bruis'd with, or without a wound, fracture, penetrating, or superficial, great or small, simple or compound, with læsion of the membranes, and substance of the brain. A Wound with a fracture penetrating, is either small, neither pressing, nor pricking the brain, or great, which doth both; or 'tis only a depression, as in copper vessels, which happens to Infants; or that part smitten, but the opposite is cleft. *Hippocrates* calls them by divers names. A

con-

contusion is known to all; *Rima* is a small division, the bone keeping its place on both sides; *Sedes*, when the print of the weapon remains, the bone keeping its place. *Defidentia* is the bone remov'd from its place, which sometime presses the membrane. Depression is call'd *thlasia*. *Camerosis*, when one or both tables elevated, is rare; *Eccope* when part of the bone is amputated; *Apechemia*, when the contrary part is cleft, which many deny.

If the signs of a fracture appear not, they must be guess'd at from the cause, as great blow, fall, wound, instrument's; if he move his hand often to his head, *vertigo*, *caros*, loss of speech, motion, vomit, follow from the beginning a great fracture, & *contra* less: though these may happen without a fracture, from concussion, or blood flowing upon the brain and putrifying; 'tis known also by a Probe, if it feel smooth, the bone is whole; if rough, if not upon a suture, suspicion 'tis broke. If he hold his breath, moisture passes at the fissure. If thred held in the teeth, be struck or any thing broken with them, cause pain; ink black the fissure: also lay an Emplaster, if one part be dryer than the other, there's the fracture. If the Membranes be cut, pain, *vertigo*, blood at ears, nostril, palate, loss of motion and speech follow, *agere dormit exornit & mingit*.

If the Brain be hurt besides these, the principal faculties are hurt. If there be an inflammation, the head swells, eyes inflam'd, with convulsion and phrensie. No Wound on the head is to be contemn'd, oft only a consultation, oft an incision of the *pericranium*, proves dangerous. All symptoms are worse the sooner they appear; oft they lie hid till the 7th day; a Palsie of the hurt side, a spasm of the opposite follow the membranes wounded. Wounds of the sutures are to be feared, chiefly of the temples; *sedes* also there dangerous. *Pia mater* black, bad, a small tumor, good *sanies*, red flesh, good. Danger not past till the 100 day; greater in the full Moon; *Callus* not perfected till the 35th, small clefts ill; also if the outward Table be whole, and the inward cleft; so *apechema*, because *sanies* cannot be discharg'd at the Wound; general Prognostics are to be re-duc'd hither.

About the Cure are divers opinions; let yet be thin, shun too much cold or heat; permit universals; shave the head, and mitigate accidents. Bind with a two-headed powder, according to the length of the forehead, rowling it towards the ear opposite to the Wound, and from the other part towards the other ear.

If the Scull be hurt, enlarge the Wound if
M need

need be, cut not transversly in the forehead, lest the eye-brows fall; nor in the temples or sutures, because of the veins, nerves, &c. and connecting the *meninges* to the *pericranium*, yet make the cut thus X if the bone must be scrap't, cut the *pericranium*: if only a little cleft, cure as before. If it penetrate the bone, cut it with scissers, or trepan, premitt-
 ing Prognostics, as weak natures, shunning sutures, lest the *dura mater* be hurt; before the 4th day in Summer, 7th in Winter, for fear of bad symptoms. *Hæmorrhagia* appeas'd with *exycrat.* and *alb. ovi*, the next day use the trepan, then the scissers, and levatory, after cure as a fracture. Take away the fragments of bones, that prick the membrane; then some use dryers, for *siccum sano proximum*: others lenifiers; dryers that the membrane putrefy not, and so scale, as cephalic plasters and powders, dress the Wound with *lin. Arcii*. If the membrane be hurt, first use anodines, then dryers. If there be a tumor, *ol. ros. camelle*, those that lenifie use *ol. ros. sang. columbæ*, &c. *mel. terebinth. ol. de vitell. ovor.* then use dryers, and if you deterge more *mel*, some use *syr. rosar. brandy*, then *sarcotics*, as *beton*. If the membrane be livid, mundifie if blackness continue, deadly.

Wounds of the face have nothing peculiar.

Wound

Wounds of the eyes are puncture, incision, bruise, dangerous for nobleness of sight, near the brain, loss of sight by diffusion of tumors; yet *Galen* saw an effusion of the aqueous humor cur'd, of all which before.

The Nose cut off closes not, else stich it; put pipes in the nostrils, to let in Air, and out sanies.

Wounds of the Lips and Ears, have nothing peculiar, neither, save shunning all thick, unctuous medicines, &c.

Wounds of the Neck are dangerous, because of the veins, nerves, arteries, &c. if the marrow be touch'd with the spine, motion is abolish'd; hoarseness follows Wounds of the recurrent nerves; bring your ligature across upon the Wound, and under the arm pits, and sowe it to the cap. Great Wounds of the *Trachea arteria* & *Oesophagus*, are united by stitching the flesh, and applying glutiners; and licking *diatragac. cum syr. symphyt. myrtin.* *troch. de Carabe*, &c. to the spine apply *ol. rosmarin.* warm, then mundifie and incarn. If the marrow be wounded transversly, 'tis incurable.

Wounds of the Shoulder and Arm, have nothing different, unless in binding, which ought to be strong, and in site; for the Arm wounded must be suspended, the Elbow extended.

If Wounds of the *Thorax* penetrate, Air issues, especially the mouth and nostrils shew; which a Candle, or wooll laid to the Wound, shew; great weight felt about the *diaphragma*, blood spit with cough, difficult breathing, &c. blackness of blood, extreme parts cold, cold sweat, swooning, shew the heart wounded; short breath, red, frothy blood, with cough, paleness without pain, shew the lungs wounded; plenty of blood, firength failing, in the right side of the back, shew the *vena cava* wounded. From an artery issues redder, frothy, thinner blood, leaping, a trembling pulse, palpitation of heart, *syncope*, death succeeds. From the wind-pipe issues little blood, but great pain in the back, hoarse voice, fatent vapors, fever. The *Weasen* wounded, meat passes difficultly, it and drink issue; pains are increased lying, lessened standing; thirst, inquietness, fevers succeed. The spine wounded, the inferior parts become paralytic, distended, urine, dung, seed issue, involuntary, *deliriums*, but not always. The Midriff hurt, breathing thick and difficult, cough, pain, doting, livid spittle, thin, belching, pricking rigor, the wound about the bastard ribs, the *præcordia* are pluck'd upward, pain reaches to the shoulder. Heaviness about the false ribs, putrid spittle, cough, fever, stinking breath, shew bleeding inward.

ly, because it putrifies, 6. *Aph.* 20. All penetrating Wounds are dangerous, because of the inflammation of *pleura*, and commonly end in *fistula's* or *empyema's*. Evil if black, or fetent *sanies* issues; if a nauseousness, hichoup, vomit, or flux. More dangerous behind than before because of the spinal marrow, arteries, nerves, ligaments of the heart. If they penetrate not, there's no danger, unless a nerve, or notable vessel be wounded.

Neither as to the cure have they any thing peculiar; let your ligature at the opposite part, bring it cross-ways upon the Wound. If a rib be broken, bruis'd or depress'd, see in fractures; if it be bare, 'tis to be scrap'd, then the Wound cur'd, *f. a.*

But penetrating Wounds, if the *viscera* be not hurt, nor inward bleeding, are cur'd by scarotics and ligature, without tents, premitting universals, and keeping open the wound; if any thing be scatter'd within, dilate the wound, if need, and put in a tent, tyed with a string; stich it not, lest the matter degenerate into *Empyema*, cause difficult breathing, because it cannot be vacuated by mouth, or urine, though it may sometimes be; whence in an *Empyema*, the side is forc'd to be open'd; upon your tents lay compresses dipt in *alb. ovi, ol. ros. vin. rub.* taking heed of metallics inwardly. If the matter be thick, and

will not issue, inject detergents, as *wine* and *mel*; and when it comes out as clear as it went in, then astringents. If matter lie upon the Midriff, and the sick strong, cut a new wound lower towards the spine, between the 4th and 5th rib; put in a tent with *cl. rosat.* warm, mundifie &c.

Wounds of the *abdomen*, are known to penetrate the *peritoneum*, *omentum*, *intestines*, &c. which some time come out, by putting in a Probe, or injecting Wine, if it return not; the *Caul* is known, the *Stomach* wounded, *Chyle* flows, with hichoup, nauseousness, vomit, &c. The same of the *small guts*, in the great ones *fæces* issue; much blood at the right side, if the liver be hurt; on the left, if the spleen, with *Præcordia* contracted, pain, fever. The *Reins* hurt, Blood issues by urine, sometimes supprest. From the Bladder with great pain, vomit and hichoup, by consent with the stomach. From the Mesentery besides Blood, convulsions, from the nerves. Pain in the groins and thigh, follow the Womb wounded, Blood at the Privities, and by consent with other parts vomit, pain at heart, *delirium*, &c.

Of the *Prognostics* before.

To the Cure, if the Wound be great, first put up the guts, fomenting them, if need, with *aq. calid. vin. rub. ol.* or *carminant decoction*.

tion. If they will not return, enlarge the Wound; the same of *Omentum*: And if any part be black or livid, tie it, and cut it off: then sowe up the Belly, the Muscles and *Peritoneum* together, some the *Peritoneum* with the *Peritoneum*, *Abdomen* with *Abdomen*, leaving issue below for *sanies*. If the guts be wounded, sowe them with the glovers skin; other parts have nothing peculiar, only in the Bladder abstain from Diuretics and Purgers.

Wounds of the Thigh, Leg, and Foot, the same with the Arm.

Of Wounds from Gunshot.

The names of these Arms, *Bombarda* and *Scloppeta*, are borrow'd the first from *Bombos*, i.e. *Sonitus*, properly of Bees, so *Persius*.

Torva Mimalloneis implerunt cornua bombis.

The other from *Scloppus*, a sound made with the cheeks, so the same *Persius*.

Nec Scloppo tumidis intendis rumpere buccas.

Concerning the invention of these Arms there are divers opinions; some attribute it to a German Franciscan Fryar, 1380. others say he was only the perfecter, for there was a

rude use of Guns before. For in the time of *Carolus Magnus*, who dyed about 810, or 811, *Gamofcus* King of *Friesland* kill'd the Count of *Holland*, with two of his Sons, with a Piece. *Naucerus* sayes, they were invented 1213. *Froisard*, and *Petrarcha*, 1340, and 1374, mention Guns. *Mariana* tells us, when *Alphonfus* King of *Castile* besieged *Algezira*, a Town of the Moors, they shot out of it Bullets of Iron out of Ordnances. And *Marterus* sayes, they were used by the *Chineses* many Ages ago; which may not be improbable, they being a wise People; so though the word *Arcubuse* may come from the *Italian Arco*, a Bowe, and *Buso*, a Hole, because it is as it were a Bowe with a Hole, or a hollow Bowe; they may not be the inventers neither, though stoutly stood for by the learned *Roff*.

Now as to the nature of these wounds, they are made with contusion and laceration, sometimes fracture, seldom venenosity join'd; for the common ingredients of Powder and Ball are harmless, and may be safely taken inwardly in divers diseases, as *Brimstone*, *Salpeter*, *Aq. Vitæ*, *Coals of Willow*. For *Led* and *Iron*, several preparations are made of them to be taken inwardly; so that the bad symptoms, if any, arise from *Cacochymy*. The Signs and Prognostics, and Cure, as in other

other wounds : the chief being a Gangrene, I hope I have satisfi'd thee in ; if not, see *Galopius* and *Vesalius*, for one hath transcrib'd the whole Chapter from the other, scarce changing a word :

Sic velut è speculo speculum tralucet imago.

Also for Burns from any cause, thou may'st find a Cure before.

Of ULCERS, and first in general.

And here I shall not need to be prolix, being what's said of Wounds, will save me and the young Artist much labour, if he be ingenious.

Now an Ulcer, in general, signifies every solution of unity, from *elko*, *trabo*, either because it distracts the parts, or it draws blood to it. So when the divine *Hippocrates* says, *Omnis morbus ulcus*, he is to be understood of Union Physical, which is the temperature ; as well as mathematical, which is the figure. So the *Grecians in general* us'd the words Wound and Ulcer *indiscriminatim*, though in *special* they differ in Signs and Accidents, &c. Hence an Ulcer may be defin'd,
A Solution of Unity in the Flesh, with Sanies.
Solution of Unity is the *Genus*, whereby it

is common with Fractures, Wounds, &c. *Sanies* makes it differ from a Wound, and from *teredon* or *caries* of the Bone, because in a hard part. Now as *One* and *Being* are convertible, *Arist.* 10. *Metaphysic.* and Unity being the perfection of *Being*; so Health, which is the perfection of our Bodies, requires Unity to the performing of the Functions; so that you see of what consequence is the preservation and restoration of Union.

By *Sanies*, I understand the excrements of Ulcers, which is any humor preternaturally alter'd; 'tis thin, clad, *Ichor*; or thick, *Sordes*; or mean, *Pus*. *Virus* is an excrement of thin, aqueous humors. *Sordes* the excrement of thick humors, and is three-fold, white, blackish, ashy, thick, unequal, concrete, *Squammæ*, are small hard excrements, like Fish-scales; from nitrous humors about the Ulcer, *Crustæ*, are thicker, upon it.

Causes are sharp humors, corroding, &c. as before; *Differences* in their places.

Diagnostics are apparent, in outward, of which only here; great ones are dangerous; if a long standing, malicious: in annual Ulcers, the Bone must needs be foul; &c. *Aph.* 6. 45. Bad in the ends of the muscles of the back, hip, &c. round heal slowly.

An Ulcer, *quatenus* an Ulcer, must be dry'd; removing the cause, and symptoms first; it.

lesh be wanting, use Sarcotoics. Dyet, Preparation, Phlebotomy, Purgation; you have Rules for before. In the beginning, use Suppuraters, unless it be putrid with flux of humors: in the Augment deterge, but not too much, for then 'twill become virulent; which many thinking to come from the Ulcer use stronger, so hurt. Lastly, *Sarcotics*, *Epulotics*. Of *Symptoms* before. If the lips be hard and livid, see *Schyrrus*. If you succeed not, scarifie to the flesh, or use an actual Cautey, or *Ol. Vitriol. Sulph.* &c. to blackness scarifie, or use Cups, Leeches. *Worms* are to be kill'd with bitter and deterging things.

An Ulcer, with a corrupt Bone, is difficult; the Bone feels soft, &c. much thin, livid, oleaginous, fætid, black humors flow, which is bad; scrape the Bone, or scale it with Cathartics, as before. If carious to the marrow, cut off the Bone, where you may.

A virulent and corroding Ulcer, differ only *secundum magis & minus*, this more vehement call'd *Nome*, and *Phagedena*, and degenerates into *Lupus* and *Cancer*. *Nome* hath no tumor, *Phagedena* hath about the lips, cause, and all other things, as in *Herpes*, &c. *Topics* cold, dry, stiptic; *Guido* praises a plate of Led rub'd with Quicksilver laid upon

A for-

A sordid and putrid Ulcer differ, *secundum magis & minus* : Begin with strong detergers, because the thick *sordes* oft resists the strength of medicines, and so proceed *f. a.*

A cancerous Ulcer is round, fætid, with hard, livid lips invers'd, with veins about it full of black blood, with much fætid, black *Sanies*, great pain, &c. after general Remedies, &c. if it may extirpate ; else if it be inward, nigh a noble part, palliate, with refrigerants, as *aq. solar. ung. alb. plumb. ust.* and other Minerals, wash'd in a Led Mortar, Plate of Led, &c. some apply Chickens and Veal, which they say it eats, whence 'tis called *Lupus*.

A deep Ulcer hath a narrow Orifice, and broad, with many cunicles, without hard lips, wherein it differs from *fistula* ; known by sending forth much *Pus*, and by a Probe, Wax Candle, or stalks of herbs.

After Universals, use mundifiers, dryers, and incarners, with expressing ligature, and if need, open it at the bottom ; if danger, injections only.

A *Fistula*, sometimes sends out much, sometimes few excrements ; Cure is difficult if old, nigh a noble part, belly, bladder, *vertebra's*, joints. If it be far from a noble part declining, it preserves from diseases, so cure not. After Universals, use dryers inwardly,

as decoction of *Guajac. Salsa.* &c. then dilate
with *Gentian*, Sponge dipt in melilot plaster,
with sublimate prest, elder pith oft breaks in
taking out, then mortifie with *Catheretics*,
Septics, &c. dissolv'd in vinegar, or *aq. me-*
dicamentof. injected, some use *Cauteries* and
Incision. To conclude, take here two much
used Waters for old Ulcers and Fistula's.

The first is the great *Fernelius's aq. di-*
vina.

Aqua divina Fernelii.

Rx. Sublimate gr. vii. aq. plantag. ℥ vi. boil
them in a well glazed vessel, on coals gently, till
bals be wasted.

The other is,

Lapis Medicamentofus.

Rx. Green coperus ℔ i. white coperus ℔ ℔.
alum. ℔ i℔. sal. nitr. sal. com. an. ℥ iii. salt of
tartar, wormwood, mugwort, cichory, arsmart.
plantan. an. ℥ ℔. put them in a crucible, adding
a little acet. rofat. boil them on coals gently, ever
stirring them till they grow thick, then add ce-
russ. ℔ ℔. bol. armen. ℥ iv. mix them well to-
gether till they be hard, when cold, take it out. If
you put in gums, as Thus, Myrrhe, &c. boil them
but

but little ; one ounce of this is to be dissolv'd in rain or river water, one pint, and filtred.

Of Fractures, and first in general.

A Fracture is a solution of continuity in the bone by bruise or cut ; 'tis either simple or compound : the first long, transverse, oblique, or streight, complete, or incomplete. Compound with a Wound, Tumor, &c. known by inequality of the member, one part bunching, the other hollow, great pain from pricking the sensible parts, unable to move. If long, only tumor and pain. The transverse and near the joint difficult, so with tumor, wound, contusion, fragments, old ; for in great extension, fear of spasm ; in great bones, and manifold, all difficultly solidate, where are two bones, one only broke easier than both, because the whole sustains the broken, bad if with luxation. Arms and Legs knit in 40 days, thigh 50, the rest about 20. too strait ligature hinders nourishment and knitting.

If simple, the Cure consists in restitution, conservation of the bones, generating the *callus*, mitigating accidents. To which are needful a fit place, and Servants, three rowlers, long and broad, according to the bigness of the part. (which remember in Wounds and

and Ulcers, &c. viz. commonly in Wounds
 six fingers broad for the shoulders, the thigh
 8, leg 4, arm 3, finger 1.) soft *stipes*, moi-
 sten'd in *oxycrate*; splints of scabbards,
 pasteboard, leather, or iron, thicker in the
 middle than ends, Frames for the member, a
 Bed and Bed-pan, a string to raise him up;
 two Servants to help reduce, directing the
 bone on both sides, with hands, strings, or
 other instrument. The bone reduc'd, is to
 be conserv'd by ligature, and fit posture. *Hip-*
perates counsels threefold ligature; the first
 ascending upwards from the fractur'd place,
 hinders flux of humor; the second descend-
 ing from the same place, presses the humor;
 the third conserves both, and contains the
 splints, he moistens them in *ol. ros.* if a wound
 in *vin. rub.* the Patient can tell when bound
 too slack or strait. In the beginning apply
 gentle splints, then stronger, stir them not
 often, unless pain, tumor, urge; then the 3d
 day, else 7th, then his dyet may be fuller to
 beget *callus*; which if too small, known by
 touch and weakness to motion; attract ali-
 ment with *foment*s, *friction*s, *pication*s, &c. if
 too big, known by pain, and unaptness to mo-
 tion, lessen it by a plate of led, resolving *fo-*
tus's, friction with salt, streight ligature, thin
 dyet, &c.

If there be a wound, the bone cover'd, no
 frag-

fragments, reduce the bones, cure the wound as before, by suture or ligature; binding flacker then if there was no wound; splints are less useful, lay them not upon the wound. If the bone be cover'd but some fragment to come out, known by much *swelling*, lips gaping, soft flesh, pricking; if it come at the proper place, draw it out with *forceps*, or leave it to Nature. If the bone be bare, sowe the wound to cover it, &c. if without the wound reduce it, or sawe off.

Of the Fracture of the *Cranium* and *Nose* before.

The *Ears* are rather bruised, than broke; use glutiners, with easie or no ligature; lie not on the side.

The *Mandible* is reduc'd, by putting your fingers into the mouth, setting the teeth even, binding them with waxt thred, or silver wire; begin your ligature from the *nuch*, and bring it upon the *mandible*, and behind the ears to the forehead; there sowe it, it knits in 20 dayes, dyet liquid.

The *Clavicle* is reduc'd, the bones well plac'd, by putting your knee between the shoulder-blade, strongly drawing them back, then reduce them with your hand; they are well in 24 hours.

The *Scapula*'s rarely broke, unless in its ends, inward or outward; this is easily reduc'd,

cur'd, that difficultly; hath nothing peculiar,
and heals in 24 dayes.

The *Breast-bone* is dangerous, pain, cough,
difficult breathing, spitting blood follow; 'tis
cur'd as the *Clavicle*, pressing the ribs with
your hand; applying medicines, rowl over
the breast, and sowe it upon the shoul-
ders.

The true *ribs* may be broken in any part,
the false only where they are knit to the
spine; sometime they are only cleft or de-
press'd, known by inequality and noise; if
outward, signs of a *Pleurisie*, they consolidate
in 20 dayes. The inward cur'd by good li-

ture, and things against inflammation; un-
der in a Fever, full dyet is good, because it
attends them. Shun Clamor, Motion, Ve-

ner, &c. whatever may cause cough, or snee-
zing. If the Fracture be outward, press it
with your hand, after bind *f. a.*

The *Vertebrae's* are rarely broke, but brui-
ed, Palsie, suppression of Urine, involuntary
egestion, sometime death succeeds, chiefly if
the *Cervix* be broken. Appease pain and
tumour, then roborate, cut the flesh, and pull
out the bone.

If *Os Coccyx* be broke, put the fore-finger
of your left hand into *anus*, and reduce it with
the other hand, apply fit plasters, &c. other
Fractures in the joints may be cur'd, by obser-
ving what hath been said.

Of

Of Luxations, and first in general.

A Luxation is, when a bone is out of its proper place; 'tis either complete, when 'tis altogether out, call'd *exarthroma*, *luxatio*, or imperfect, when only distorted; call'd *pararthroma*, *subluxatio*, which happens never in the shoulder, or thigh. It may be inward, outward; before, behind; upward, downward; simple, compound. There is another kind of Luxation, when bones gape of themselves, as *scapula* from *humerus*, *radius* from *cubitus*, &c. Causes are strokes, falls, mucilaginous humors, as in *Ischion*, known by tumor in one part, cavity in the other; motion, hurt, pain, shortness. Gaping is known by tumor of the head of the bones. The Article only lax'd, is quickly in and out. Luxation difficult, where strong ligaments, ample cavity, but more difficult to reduce; easier in soft, lean bodies, so the relapse often. Difficult to cure, if attended with bad symptoms, for no reducing till they be vanquish'd: so if old: worst, if the mouth of the cavities be broke.

The Cure consists in reduction and conservation of the Article, removing of Accidents, as in Fractures.

The *Jaw* is difficultly luxated, because of the

the strength of the muscles, and firm articulation, to which 'tis connected to the upper part, it happens only to the fore-part, not the hinder, because the bone hinders; not the right side for the left, not the left for the right head; caus'd from wide opening the mouth, or weakness of the muscles; speech is marr'd, chewing abolish'd, spittle flows, mouth distorted; if only on one side, the teeth answer not their fellows, but the long teeth are under the cutters; but if both jaws be luxated, the lower are longer than the upper, though they all answer one another. This is dangerous, unless it be quickly repos'd, because of fevers, distention of muscles; more when both than one, from inflammations, consent of the brain, vomiting of choler and flux. Reduce, by putting the fingers, thumbs, wrapt about with linnen on the teeth, press them hard, and lift up his chin with the rest of your hand. If both sides go the same way, but let them be equally put back. Being repos'd, use astringents and fit ligature, divide the band at the chin, and about the ears, making one or more circumvolutions upon the *Vertex*.

The *Vertebrae* may be luxated, or subluxated, forward, backward, and side-ways; if next the head, the chin falls to the breast; so that he can neither speak, nor drink; 'tis deadly.

deadly. If above the *Septum* inwards, difficult breath, distention of Nerves, vomit, shaking of the hands, death follows; under the *Septum*, the Thighs resolv'd, Urine suppress'd, sometime involuntary excretion. First extend, then reduce, by setting the Patient low, and one weighing heavy upon his shoulders, the Artist putting up, and moving the head to and fro till set. Mr. *Hales*, a famous Artist in *Northamptonshire*, cur'd one below the neck inwards, by taking the Patient's hands about his neck, as if to be whipt, and giving a sudden jerk with his posteriors. If outwards, lay them on a Table, the face downward, bind them under the arm-pits and flanks with strong leather thongs, and make extention, and force in the bunch with your hand; or lay a Form upon it, and sit or tread upon, taking heed of the Process.

The *Clavicle* is never wholly luxated, nor forward, for its firm adhesion to *os pectoris*, nor in the other head where it cleaves to the *Humerus*, doth it go out much, because hindered by the cartilage, *biceps* and *deltoid muscles*. If the head of *Humerus* be luxated, 'tis sharper, the bone stands out, and with a hollow; 'tis reduc'd with the hands, and bound as in Fractures. Thus is the highest *Humerus* reduc't, by forcing the Bone that is out downward.

The head of *Humerus* is inserted into the superficial *sinus* of *Scapula*, and involv'd by a lax ligament, and cannot be luxated on the outward, upward, inward, backward part; but divers defences, but only downward and forward, wanting defence there, rarely forward, for the resistance of *muscul. deltois*: so that *Hippocrates* never saw it, *Galen* but five times, yet the *humerus* and *femur* may be perfectly luxated from violent causes, known by common signs, and comparing. Divine *Hippocrates* layes down several wayes of reposing.

1. New and tender, with hands only put under the arm-pits.
2. By the Servants shoulder put under the arm-pit, drawing his arm toward the belly.
3. By a Ball under the arm, thrust hard with the foot, drawing the arm downward.
4. By a Ball put under the arm-pit, then a round Staff transversly put under, two Servants lifting it up, bringing down the arm.
5. By a Ladder, but the Staff may suffice; being restor'd, keep a Ball under with fit ligure and medicines, as in Fractures.

The *Elbow* sometime in part, sometime wholly luxated, before, behind; inward, outward; signs common: if not quickly reposed, bad symptoms follow from great nerves there. Extension must be oblique with

with hands, or bridle reins; then as others.

Carpus, metacarpus, digiti, may be luxated every way, forward and backward; *carpus* out forward, the fingers cannot be bent, because of the compression of tendons; if inward, the hand is distorted in the opposite part. These are easily repos'd, by putting the hand upon a Table, upward, if out inward downward, if backward; then extension made, repose them, with medicines and bandages as before.

The *Thigh*, according to some, is luxated only three manner of wayes, oft in the inward part, because the top of the *sinus* is less deep, and, as the *humerus*, is perfectly luxated; sometime in the outward, but by great force; seldom in the forward and backward because the *cotyle* is very deep. If the *Thigh* be fallen into the inward part, one shank is longer than the other, a cavity appears from the outward part in the buttock; knee, foot, whole shank, bend outwardly; because the bending muscles are bound, yea, the head of the thigh nigh the *perinaeum*, is perceived to bunch; but if it be slipt in the outward part, the shank shorter, bunch outward, but within hollow, the shank cannot be mov'd, the head touches not the ground. If in the forepart, the leg is extended, but the *inguen* cannot bend.

as it is, Urine suppress'd. If in the back-part, *contra*, the leg bends not, is shorter, the heel touches not the ground, buttock, bunch, cavity, in *inguine*. 'Tis difficultly repos'd, and unless quick, the *sinus* fills and hardens. If inward, they turn their feet about in going, like Cows, and lean upon the sound foot; if upon the hurt they fall, unless they use a Staff on the whole side: But if outward, they walk better, and use the affected leg. To reduce, extend with hand or band; the body lying upward or downward, use two bridle reins, one from the *inguen*, the other from the knee, the rest *f. a.*

The *Knee* may be luxated any way, except forward, for the opposite *Patella*; easily reduced. The *Patella* is by the hand reduc'd, by the Patients fixing his foot upon the ground.

The *Leg* is reduc'd easily by small extension, but difficultly confirm'd, because of many Bones compounding the Article. Strive not to go, before perfectly confirm'd. If *os calcis* be disjoin'd from *astragalus*, heavy symptoms succeed, from the greatness of nerves and tendons; 'tis easily repos'd, but must be long bound, because it sustains the whole body; in the sole of the foot and toes, as in the hand.

Thus have I laid down the Cure of Tumors,

mors, Wounds, &c. with their Causes, Signs, Diagnostic and Prognostic, from the pure Fountain, or indeed main Ocean of *Hippocrates* and *Galen*, those greatest Luminaries of Physic; and from them thou hast, (as it were by a concatenation, or series of time,) the doctrine of the most learned and orthodox Writers to our times, *Grecians*, *Latines*, and *Arabians*; not being ignorant, that since *Pythagoras*, there have been too many that have been too lightly esteemed, or altogether neglected by the Ancients; but such I pity, with a learned man, as feeding upon airy fancies, loathing the solid, wholsom viands of ancient wisdom, and dig to themselves Cisterns that will hold no water; like women and children, who love new Wine, because pleasant to the taste, when wise men choose old, because wholesome. They slight the dictates of the Ancients, because they misconstrue, or misunderstand them, not considering that we are but children in Understanding, to those Fathers of knowledge; Dwarfs and Pigmies, to those Gyants in wisdom, and without standing, as they were, upon their shoulders, shall not see so far as they. I am not against Emulation in any man, yet let it be with their supportation, for indeed without that it cannot; and let him take heed, lest he lose the substance, in catching at the shadow.

Of the

VENEREAL DISEASE.

THIS Disease hath obtain'd as many Names almost as Countries, with us it is commonly call'd the *French Pox*; but to give no Affront to any Countreyman, I have call'd it *Lues Venerea*, or the Venereal Disease: And well I may, for undoubtedly its first rise was from impure Venery; and so is of greater Antiquity than *Columbus's* return from the *Indies*, 1453. the siege of *Naples*, 1485. or the oldest computation can be found; even as old as Whoring, which hath been almost from the first Age of the World. Upon which there is extant an elegant and rapid, enigmatical *Hexasticon* of *Serranus* a Physician of *Lyons*, concerning the doubtful Origine of this Disease.

*India me novit; jucunda Neapolis ornat;
 Batia concelebrat; Gallia; mundus alit.
 Indi, Itali, Hispani, Galli, vosque orbis alumni
 Deprecor ergo, mihi dicite quæ Patria?*

But not *ludere cum sanctis*, since this Disease, for the most part, breaks out in Ulcers, &c. in

N

the

the obscene parts *anus*, and *penis*, with filthy scabs and itching; one may doubt, not without reason, whether this was not that old *Plaga Legis*, threatned to the disobeyers of the Law. God will smite thee with the Ulcer of *Egypt*, and that part by which the dungs are ejected, with the scab also and itch, &c. a little after he adds the worst and perpetual infirmity, for this is the scourge of Whoring, and is perpetuated in some with Pains, and worst of Ulcers. And why may not *Martial* mean this Disease, in that Epigram?

Cum dixi ficus, rides quasi barbara verba,

Et dici ficos Cæciliane jube:

Dicemus ficus quas scimus in arbore nasci;

Dicemus ficos Cæciliane tuas.

Fracastorius calls it in derision *Siphylis*, *para to sinein pbula*: & *perappositi*, says *Laurentius*, *Notatione vocabuli a scropha* & *amore desumpta quam vulgus publica postibula* *hoc nomine appellet*; others *Pupendagra*, in imitation of *Pliny's Mentagra*.

But to pass by what may not be of so much use to the Artist, I shall betake my self to its Signs Diagnostic, Prognostic, and Cure, with its Symptoms, Precedent, Concomitant, and Subsequent.

It is known by *Gonorrhæa*, i. e. flowing a hot, virulent humor, not feed, from the

reins, or an inflamed Ulcer of prostrate glands, whence proceeds varicolor'd Sanies, white, green, bloody, &c. which suppress, or cur'd, turns to the Lues. Bubo's, which if well suppurated and cur'd, may prevent a farther danger; but if they go inward, promote it. Then follow in the face, pustules, &c. pains, not in the junctures, but middle of the limbs, which afflict more by night than day; humors having then not time to fix, but in motion and dissipation: Ulcers of the privy parts, mouth, nose, &c. pains in the head, nodes in the bones, and tumors like *Liberoma*, Ulcers in *Uvula*, and many more symptoms, which appear not alwayes, as a small Fever, Warts in the obscene parts, diurnal pains of the shoulders, legs, membranes, from sharp humors, which are follow'd by trophi, carious bones, &c. at last death, from an hectic Fever, or Cachexy, though *Dr. Whistler* says it kills none.

Easier cur'd in the Beginning and Spring, than Winter; or when inveterate, and in a acrochymic body, and hath corrupted the solid parts.

Let the Cure be heating and drying, so that fasting is very requisite, as much as the nature of your Patient will bear; for, *impura corpora quantum nutris tantum ledis*; shun gross, melancholy meats: Fish, Milk-meats; but Par-

tridg, Feasants, Chickens, Mutton, roasted: Almonds, and Raisins; Filbirds, and other dryed Fruit. Drink sparing, and not strong. If accustomed to wine, or strong drink, put a little water, or small beer to it. Too much sleep hurtful, especially at noon, unless he slept not by night. Strong exercise good, but *Venus*, Sadness, Fear, wholly forbidden. Belly to be kept loose; yet you must have regard to the strength and nature of the Patient, time of the Disease, &c. for one sort of dyet is for phlegmatic, another for melancholic persons; thin in the beginning. But first of all you are to prepare the body by general remedies, as Phlebotomy, Purgings, &c. if Bubo's hinder not, cupping with scarification, leeches to the hæmorrhoids. Then proceed to administer antivenereal Antidotes, which may expugn the Poyson, by Sweat, Spittle, &c. the chief whereof is *Guajacum*, which prudently order'd, agrees with all ages, times, persons, *Sassafras*, *Salsaparilla*, *China*, some use the two last to weak, hot bodies, the other to strong and cold. Thus prepar'd:

Rx. *Ligni sancti*, (*Guajac.* so call'd, for its miraculous effects, it seems, in *Greek Hagion* lon.) ζ iv. cortic. ejusd. ζ ii. infuse them all night, or 24 hours, in Rain, River, or Spring water, lb xvi. close cover'd over hot coals

boil them gently to the absumption of half ;
adding at the latter end, a few Raisins of the
Sun, if you will, and Liquirice, red Sanders
Aspt, and Cinamon, to dulcorate, colour, and
aromatize. Let the Patient take four, six, or
eight ounces of this in the morning fasting,
and at four or five of the clock in the after-
noon, sweating either in a Hot-house, or in
Bed, or Chair. The ingredients for the first
decoction, are to be boil d again, for his ordi-
nary drink, to which you may add fresh wood
ii. infuse them in lb xii. of water, all night,
and boil them to the absumption of the 4th
part: so according to the nature of your Pa-
tient, you are to order your decoction ; or
you may add to the first *Salsa*, \mathfrak{z} ii. or iv.
Cassiafras, and *China*, an. \mathfrak{z} ii. some add
White-wine, third or fourth part to the wa-
ter ; some purgers, as *senna*, *agaric*. *hermo-*
liti. *jalap*. *mechoac*. *polypod*. *epithym* *turpeth*.
&c. others add *lig. bux*. *eben-juniper*, &c. and
such *farragines simplicium*, as Mr. *Wise-man*
from Sir *Theodore de Mayern*, which are whol-
ly superfluous ; some put *Guajac*. &c. in a
bag, with purgers to new Ale, and so drink
one point, or half, or \mathfrak{z} iv. every morning, and
five in the afternoon.

Now for those that lead sedentary lives,
and are full of obstructions, some give this
Electuary, after Generals premis'd.

Rx. Conf. Lujula, Berber. an. ʒ iii. coral. rub. præpar. ʒ ii. ocul. cancror. sal. chalib. tar. tar. vitriolat. an. ʒ iʒ. succini ʒ ii. cum syr. corall. F. Elect. Dose, quantity of a nutmeg fasting every morning, and at four or five in the afternoon, exercising after it; purging every three or four dayes with this Portion. *Rx. Vin. alb. ʒ iii. syr. rosar. solut. ʒ iʒ. ad ʒ ii. lac. sulph. ʒ ii.* and sweating once or twice a week.

Those that are afraid to lose the palate, or bridge of the nose, they keep sweating in the Low-Countries, in Bed, five dayes or a week, drinking or eating nothing but hot posset-drink, now and then a draught.

Such persons as are effeminate, and of weak constitutions, may take a spoonful of this Balsam in every draught of Beer or Ale he drinks, for a month together.

Rx. Sarfa. ʒ iʒ. china. ʒ i. split and cut, and bruised into ʒ viii. of spirit of Wine, put in a Glass close stoppt with cork and bladder, so long till the spirit be of a golden color, then strein it, and add to the liquor Gum Guajac. Pulver. ʒ i. natural Balsam ʒ i. stop close and shake the Glass once or twice a day, till the Gum be dissolved, purge every 3d day.

If the Disease be new, some *Rx. Vin. alb. ʒ iii. theriac. Andromach. ʒ ii balsam. sulph. gr. vii. F. potio.* fasting three hours after. Some

the Balsam alone : For extreme nocturnal
pains, and pushings, or swellings, some
give ten grains of this mass every night going
to Bed, for 40 nights, compos'd to a mode-
rate sweat, drinking nothing all the while but
aq. font. 'tis this : R. Gum. Guajac. ʒ ii. An-
tim. Diaphoret. Ol. Sulph. Diacryd. Cran. Hu-
man. Calcinat. an. ʒ i. Opii. Thebaic. ʒss. Croc.
Anglic. ʒ i. Succ. Chamomel. q. s. F. mass.
f. a.

If all this prevail not, you must come to
the Hydrargyrial Cure, either inwardly or
outwardly ; inwardly, either crude or pre-
par'd, as they call it : Crude, 'tis given with
Extract. Rudii. Pil. ex duob. or coch. min. ad-
ding ʒ i. of mercury, extinct with terebinth. suc.
limon, salvia, saliva hominis jejun. to ʒ i. of the
Pills, making them up with ol. amygdal. dulc.
Some add gum. guajac ʒ i. dose to ʒ i to be
continued, or intermitted, till the Cure be
perfect. These they call Pill. Barbarossæ or
Ceruleæ : The dyet of Guajac, Salsa, China,
Sassafras, as before. The prepar'd, is merc.
dulcis precipitat, turbitb. mineral. &c. adding
10, 12, 15, 20 grains of the Pouders, to ʒ i.
of the purging Pills as before, dose the same.
But outwardly, your Ung Neapolitanum is
best, to procure salivation ; which to do, uni-
versals premis'd as before : You must keep
your Patient in a hot Room, close by the fire,

and anoint the soles of his feet, legs, hams, going no higher; then the palms of their hands, wrists, and bending of the elbow; do this once a day, till salivation be rais'd; wrapping him in hot linnen, put him to Bed, there let him sweat; in some a flux of the belly, not at mouth succeeds; then tumors resolve, ulcers dry up, and pains abate: to the mouth you may use gargarisms of *bord. fol. plantag. equiset. violar. cynogloss.* &c. with *alum. syr. diamor. mel rosar.* &c. if the flux of belly be too great, give the *decoct. guajac. with white-wine*; or remedies against fluxes, if of the mouth, Clysters and Purgers.

Now for the Symptoms, and I. *Gonorrhæa*, is cur'd by Phlebotomy first, è malleolo, cooling dyet, and altering, emulsions, apozems, &c. *in principio*.

Rx. *Medul. cassia*, ʒi. *elect. lenit. an.* ʒss. dissolved in *in aq. bord. emulsion*, or whey, or taken alone: after you may add *rheum*, *senna*, with *terebinth*, and *crem. tartar*, towards the state or declination, and not in the beginning, as *Bunworth* and others do, for by reason of the grand quantity of fixt salt it contains, as the Chymists speak, it renders the Urine more hot and sharp; as for *chrystal mineral*, it may be given in a virulent one in the beginning in *aq. chicory*, in the declination in *aq. plantag.* then if it be virulent, Rx. *salse, china, an.* ʒss. *salvia.*

Chia. M. i. sennæ ʒi. sem. coriand. preparat.
ʒiii. boil them in vin. alb. & aq. font. an.
ʒiii. ad dimidii absumptionem; while 'tis hot,
add rhei ʒii. sliced, and let it infuse all night
with the rest; in the morning strain it, and add
to the liquor syr. de cichor. cum rhubarb. ʒiv.
℥ss. cochlear. xii. fasting, as long as it lasts.
Then R. Elec. lenit. ʒiii. medul. cassiæ. in aq.
rosar. extracti. terebinth. venet. in aq. plantag. pa-
rum lot. (for the more it's wash'd, the less it
deterges, so not fit here, as in a fresh one) an.
ʒss. rhei. pul. ʒii. misce, dos. quantity of a
walnut fasting, and as much at four a clock
after noon. Or R. Guajac. ʒiv. senna ʒii.
sem. anis. liquirit. an. ʒi. lig. nephritic. ʒss.
boil them in aq. font. ad dimidii absumpt. then
add agaric. ʒiii. let them stand all night, in
the morning strain it, and add to the strain'd
liquor syr. rosar. solut. ʒiv. dos. ʒv. fasting;
then R. aq. plantag. vin. alb ʒiii. an. terebinth.
venet. in aq. ros. lot. ʒss. vitel. ovi. for one dose;
mix the terebinth and vitel. in a mortar first,
then add the liquor. Or R. Infus. croc. med
all. ʒi. oxymel. simp. ʒii. fasting, cum regi-
mine: then you may give extracti. rudii. ʒi.
mer. dulc. often sublimated, call'd catomelos, xii.
or xx gr. F. Pil. No iii. circiter, for one dose;
then he may take this, R. rad. chine, sarsæ,
℥ss. sennæ, rad. Nymphææ, an. ʒi. uvæ passæ
concitat. ʒiv. sem. carui, cinnam, an. ʒiii.

boil them *s. a.* in a Pipkin, till half be wasted, strain and dulcorate with common treacle, ζ vi. *dof.* ζ iv. fasting, for several dayes; going to Bed, take every night five large Pills of *terebinth. cypr.*

You may all this while, if need be, inject into the Yard decoct. *tormentil. virg. aurea, pilosel. &c.* dissolving ζ i. of *sacchar. saturn.* or in inveterate Ulcers first, *collyrium Lanfranci*, much approved by many, 'tis thus made:

Rx. Vin. alb. lb i. aq. plantag. rosar. an. ζ iii. auripigment. ζ ii. virid. aris ζ i. aloes, myrrh, an. ζ ii. terantur subtilissime, & F. collyrium. If it be too sharp, you may add *trochis. alb.*

Some, when all fails, give from five grains to ten, of green precipitate inwardly. *Remedeus*, a famous *Parisian* Physician, gives you a sovereign water for a *Gonorrhæa*, which dulcifies the sharp, sordid humors, either in the reins, or other passages, urinal, or seminal: thus made:

Rx. Fol. acanth. lapath. hortens. concis. summitat. altheæ. an M. ii. flor. nenuph. M. iii. sem. lin. senel. an. ζ i. sem. 4 frig. maj. an. ζ i. macerentur per diem in lacte asin. aut vaccin. postea distillentur in Balneo. You may take this alone, or dissolve ζ i. or ii. of *trochis. gordon, de spodi.* or *alkekeng.* in ζ iii. or iv. of this water. You will find likewise that your *syr. de althea*,

al. mucilag. myrtil. de 5 radic. raphan. de sym-
bito, &c. will be of good use toward the
 declension; not in the beginning, because
 sugar is of a hot, sharp, cholerick nature.

Quercetan's water is this: *Rx. Rad. Irid.*
arent. fol. diptam. cret. menth. sicc. an. 3 i. sem.
gni cast. rut. lactuc. an. 3 vi. terebinth. venet.
iv. vin. alb. 3 xx. Bruise what is to be brui-
 ed, put all into an Alembic, distill in *M. B.*
dos. cochlear. ii. fasting.

In an inveterate *Gonorrhæa*, *Palmarius*, a
Parisian Physician, and *Mercatus* give *iii.* or
3 of this following *Lixivium* fasting.

Rx. Cinerum siliquar. fabar. 3 i. aq. parie-
ar. tepent. lb i. macerate them for four hours,
 then strain or filtre it, to which add *syr. altheæ*
iv. he sayes that you may give it in a new
 one, with *aq. plantan.* for *aq. parietar.* & *syr.*
ular. aut limon. instead of *alib.* to which you
 may add a little *aq. ros.* If this avail not, he
 sayes you may use these following Pills, from
 the same.

Rx. Alo. rosat. cretæ. succin. rad. gentian. ari-
loch. rotund. rad. dictam. myrrh. an. 3 i. mi-
ridat. 3 iß. terebinth. venet. 3 i. cum syr. de
alb. q. s. F. Mass. dos. 3 ß. every other day
 fasting; which, they say, will vanquish the
 most stubborn *Gonorrhæa*, taking heed you be
 not impos'd upon by an Ulcer of the bladder,
 when you must advise with the learned Phy-
 sician.

For

For other Symptoms, as *Bubo's*, *Carnuncles*, *Nodes*, &c. thou hast enough before, if thou art ingenious.

Now if a Child be offer'd thee to cure, infected with the venereal disease, thou art to consider whether it suck, or not; if it do, the Nurse is to be concern'd, who must be free her self. If the Child have any Ulcers, or Pustules in the mouth, see to cure them, first with decoctions, and other medicines, as thou hast light enough. Then let the Nurse be dyeted, as if she were infected, only she must eat boil'd meat, to afford milk for the Child, which else might be dryed up by the dyet; premitting universals, making the Child some pap of the decoction of *Guajac. salsa*, and *china*, &c. with *sugar*, or *syrup of caryophil*, &c. or boil *lig. guajac. china, salsa*, &c. with Chickens, in *aq. fluvial. aut font.* with *fol. borag. bugloss. chicor. endiv.* &c. till half be wasted, then distill the rest, and give the Child thereof with *sugar*. This way may be very good for People of full age, (with *Veal*, if need be) that have a lent, hectic Fever, or give it *aq. theriac. or cordial. frig. Saxon*, with some *sugar*, as before.

If the Child suck not, give it of the common decoction first opening a vein, purging it with a little *senna*, and *syr. de cicbor. cum rheo*, or infuse *senna* and *rheum*, in some white-

white-wine Posset-drink; or *syr. rosar. solut.*
cum senna; dose according to your Patients
 mature: or give these, with the decoction af-
 terwards, or infuse some purging simples
 therein.

Thus have I faithfully laid down the genu-
 ine way of curing this *protean* disease, which,
 (as the learned *Fracastorius* well observes) is
 of very antique date, and hath its rising and
 setting, appears and disappears for a long
 time; whereupon after such intermission it
 hath, at its first coming, been accounted new.
 By which way, if thou art ingenious, thou
 may'st vanquish it in any of its apparitions;
 and that Galenically, which you will find the
 safest: for I do not account fluxing with *Di.*
gr. xxx. turbith, mineral. merc. dul. precipitat,
&c. given for several mornings, till flux be
 rais'd, to be a Chymical Cure, as some ima-
 gine; and therefore abstain from all manner
 of preparations of *Mercury*; whereas Chy-
 mistry, as they call it, (which is nothing but
 a certain manner of preparing Medicines)
 was invented and used, long before him they
 call the Author, *Paracelsus*, by Dogmatical,
 Galenical Physicians, as *Lullius, Villanovanus,*
 and others, as the learned *Primrose* shews in
 his *Vulgar Errors*. Nay, *Fernelius*, the Prince
 of Modern *Galenists*, was a great Proficient
 in this Art; so was *Mathiolus, Erastus, Crato,*
 Phy-

Physician to three Emperors, all great *Galenists*. Nay, *Riolan*, when he had (by the Command of the Colledge of Physicians at *Paris*, who are the strictest observers of *Hippocrates* and *Galen* in the World) overthrown the *Paracelsian* Machins; adds, that that School (which contain'd the most excellent Physicians of *Europe*,) left every one free to use Chymical Medicines, provided the ancient method of Curing, according to the Precepts of *Hippocrates* and *Galen*, remain inviolable: and in their *Pharmacopœa* 1638. set down a preparation of *croc. metall.* and *merc. dulc.*

Now as for crude *Mercury*, many *Galenists* have been afraid to use it; but the several Testimonies of great Physicians, evince that it may be given safely, and crude the best; nay, in some Cases, there is no Cure to be perform'd without it, chiefly in *Unction*.

Dioscorides sayes, it hurts only by weight.

Avicen, Prince of the *Arabian* Physicians, sayes it hurts not, because it evacuates it self by the belly.

Rorarius, sayes he knew a *German* in a Goldsmiths house, who after being drunk wak'd, and being dry, in the dark, took a 3. lb. Pot of quick-silver, thinking it water, drank it off, and went to Bed, rising in the morning, and feeling his sheets moist, found 'twas quick-silver; the same affirms that he

knew

know divers Women take it, to procure easie delivery, and bring forth the secundine, without danger. Moreover, he affirms, as others, that it kills only by its weight: and that he hath not only heard, but seen it given safely by Women and Physicians, to Children half dead with the Worms, and Women in difficult labour, &c.

Brassavolus, a famous Physician *in examin. simplic* sayes he hath given 3 i. to Children; if to Children, then Men, &c.

Amatus Luritanus, calls those ignorant in Physic, that dispraise it, for reasons with *Discorides*, and that it was prescrib'd by the Spanish Physicians, (and they are very cautious) with very good success, and without any ill symptom, to Boyes infected with the Worms, he adds bewicht; and tells a Story of a Boy of 10 years of age, that drank above 1 lb. of Quick-silver, in stead of Wine, who perceived no ill symptom but weight, and by Clysters voided it, without any harm.

Mathiolus also, a famous Physician, is of the same opinion, and confirms all, and tells you *Epist. ad Laur.* If it be extinct, it sticks to the stomach and intestines, and causes cruel symptoms: And indeed by the various preparations, its nature is but hid, not taken away; neither is any preparation so safe as crude: for if crude added to sublimate, they'll confess, takes

takes away its venom, and makes it harmless, much more is it safe in it self: For, *Nil dat quod non habet*; and if it imparts sweetness and pleasantness to a most dangerous poyson, it must, without doubt, contain such in it self; *Nam propter quod unumquodque est tale*, as the Philosophers say, *illud est magis tale*. So that 'tis only to be observ'd, that it be not given in too great a weight, or that there be no bad humors in the body; and that it is fitter for phlegmatic, than cholerick, or melancholic constitutions: nor is it therefore to be rejected, for so you may reject any Medicine.

Laurentius, a most famous Physician, and Chancellor of the most famous University of *Montpelier*, in the Cure of this disease, sayes; we must of necessity have recourse to mercurial remedies; when the others cannot prevail.

Rondelitus, another famous Physician, and Chancellor of the same University, in his Cure of this Evil, speaks Wonders of *Mercury*, and deciphers the properties it hath against it, in what manner soever administered.

I shall conclude with the testimony of *Hartman*, a most expert Chymist, who taught several preparations of *Mercury*; yet, treating of the Cure of the Worms, the most excellent, sayes he, is *Mercury crude*, taken by it self,

from 3 i. to some ounces; or first mortified in *succ. limon.* but in a lesser dose, for then it carries longer in the body.

And here I must not omit to take notice of your **Doctors of the Host** in London, that pretend to Cure all People easily, though the most inveterate, and in the space of 2, 3, or 4 weeks, or such a time, without observing any order of dyet, &c. so that their nearest Relation shall not take notice. But I would not have the honest Artiste to make any such promise, and all others to beware of such Impostors; for though the Cure hath been, and is too much neglected by Physicians, and so vulgarly is believ'd to belong to the Chyrurgion, yet it is their work, and requires a great deal of industry, and none but the ingenious and skilful Chyrurgions are able to perform it, as the learned *Primrose* hath observ'd in his *Vulgar Errors*; for it must be a light disease that can be cur'd, after such a slight manner, as they pretend.

Lastly, I cannot but take notice of the disingenious dealing of the *Chymists* with the *Galenists*, about the Cure of this disease, and not only in this, but all other; one for instance may serve for all, for *Ex pede Hercules, similes habent labra lactucas*, and that is one Dr. *Manwayring*, that calls his Book, *The History, &c. of the Venereal Lues, &c.* wherein he tells.

tells you, he gives you the Cure from the *German, Italian, Spanish, French Galenists*, and there names them: But I must tell you, they are almost all the very meanest he could pick out; omitting the Cure from the most famous: as from the *Italians*, the two most famous that ever wrote of it of that Countrey, viz. *Fallopins* and *Cappivaccius*, whom our famous Dr. *Read* layes down, to serve for patterns of all that ever wrote; of *Mercurialis*, Prince of the *Italian* Physicians, not a word. Then for the *Germans*, he layes down the way of Cure used by two or three obscure Physicians, but not one word from the famous *Senertus*, that *Galenus Germanicus*, nor any other of Note. For the *Spaniards* indeed, he gives us onely one of Note, and that is the great *Mercatus*; a better method than whose, to cure this disease, I doubt he, nor any other Chymist, hath not any; nor for any other disease than this learned man hath left in his Voluminous Works.

Then for the *French*, he begins with *Rondeletius*, whose method is none of the best, only he approves *Mercury*, as before. For *Quercetan*, enough of him before; neither do I take him for a *Galenist*. But not one word from the great *Fernelius*, the *Galen. Gallicus*, who hath wrote a most excellent Treatise of this disease, and I forbid all the Chymists

to shew such another; nor a word of
his Scholar *Palmarius*, who hath done a great
deal better, and more learnedly than *Querce-*
l. One point of his candor and ingenuity
towards *Galenists*, I must not omit, wherein
he shews how little he is conversant, or his
ignorance in the *Galenical Pharmacopœa's*,
whom he pretends to correct; for in Tran-
scribing a *Recipe* from one *Benedictus*, for the
Cure of this disease, when he comes at the
word *Geneliabin*, though he hath falsely Tran-
scrib'd it, or by fault in Printing, he calls it
Geneneliabin; he sayes, which word I know
not what to make of: but if he had but read
two of their modern famous *Pharmacopœan*
Doctors, viz. *Bauderon*. and *Renodeus*; he
might have seen what to have made of
it, namely, that which the *Greeks* call'd
Ribodomel. and the *Latines* *mel. rosat.* the *A-*
rabs, call'd by that name, only *Renou*, will
have it *Geleniabin*, with the learned Monks in
their Censure upon *Mesue's* Antidotary,
who tells you that the word is in *Avicen*;
5th Canon, and *Haly, filii Abbas, cap. de condi-*
tionibus alibi, and sayes, 'tis call'd *muraba* also,
and *challengebinum*: and makes a long Sto-
ry about it, which here to recite, would not
be fit. And in several places of this Book,
the Doctor derides the manner of writing of
those ancient Physicians, when they are often
falsly

fallly transcrib'd, or misprinted. But to conclude his Book, when he hath given you, as he would make you believe, the best way, the *Galenists*, (whose repute is such, he says, that most Physicians, their Successors, do follow, as their Guides, in Curing, though (as I told you) he is mightily out) have to cure this disease: Then he inveighs against the incongruous Compositions, and Pedantic *Recipe's*, as he calls them, upon the Files; and tells you, the cause of all this, is the Physicians very imprudently, and perniciously casting off their proper charge and main duty in preparation and improvement of medicines by their own hands, and diligent inspection over all that appertains to that work; the neglect whereof hath made them incapable, to see and correct the gross Errors of Traditional Book Medicines; and then gives you an example of one *Bolnest*, that hath made an improvement with success, by being his own Operator; but because *Bolnest* hath been already learnedly handled by *Dr. Twisden*, I shall wave him, and come to our Doctor, and must tell him, he is much mistaken here too; for there are *Galenists* that are not so negligent, or so much altogether governed by Tradition, but that they have made an improvement and refinement of both *Galenical* and *Chymical Pharmacopæas*, witness *Zwelfer*, *Pharmacopæa*, *Ant*

Antwerpiensis, le Febure, which he had from two famous Parisian Doctors : our London, by the Learned Sir George Ent, and last of all Monsieur Aquin's, set forth by Charas, but by his command and approbation; so that if you, or your Brethren, have any better, you are very much too blame, and very bad Commonwealths men, if you do not impart them, and bless the world with them, as they have done, but keep them secret ; or at least make the world believe, you are blest with secrets and better medicines, which none but the *Adepti*, or rather your *Inepti*, are worthy to partake of, or can attain to ; whereas the Orthodox conscientious *Galenist* , imparts all to the world, knowing that *bonum est diffusivum* ; & *quo communius eò melius* ; that it is the experience of the goodness of Medicines that hath made them common ; and that Physician that well understands *morbum, method. medendi, materiam medicam, & componendi rationem* ; I'll assure you shall need none of your Secrets. 'Tis related of *Cappavaccius*, a great *Paduan* Professor of Physic, who, when desired of the German Students, that he would communicate his Secrets to them, answered, Read my Practice, and you'll find my Secrets ; in which Book there is no Secrets, or *Arcana*. Now all Secrets are simple, or compound, and if any one shall find out the faculty of a simple medicine

dicine not yet known, such an increase to the Art is worthy praise, and may be call'd a Secret ; as he that first found out the vomitive nature of Antimony, and the efficacy and composition of Gun-powder, that first brought Jalap, &c. into use, had worthy Secrets. Now if their Secrets be such, they deserve to be esteemed, neither are any other things to be admitted ; so for those *Recipe's*, which are compounded of the ordinary *materia medica*, as there are very many, they are not to be accounted Secrets, though a Physician keeps them to himself, and would not have them known ; for every learned and skilful Physician, may invent and frame such to himself as occasion offers, and he pleases, *ad infinitum*. So that it hath been an unhappy custom, with some ignorant Physicians, *verbatimim* to transcribe Medicines out of Books, and these to keep secret, lest if other learned Physicians should see them, they might make them laugh ; hence comes it to pass, that many here in *England* are deceived, in getting Secrets from such, which had none ; and if they be good, yet such, or the same, may be invented out of the *materia medica*, diversly compounded ; as from letters put diversly together, divers words are framed. The learned *Primrose* tells a Story of one, that had a description of a certain Purge, which, he said,

aid, a very learned Physician, now dead, gave him, which when he saw, could not forbear laughing at the foolery of the composition; yet he would make it up for his Wife, but he perswaded him to give it to the Apothecary to make up, and to give only the third part, with which she was sufficiently purged: The like of such idle *Recipe's*, I could produce divers examples, too long here to recite; so that thou seest by this time, 'tis not the orthodox learned *Galenist* that imposes upon the world, but such as *Thompson*, *Marchemont Nedham*, and too many such, as contradict *Hippocrates* and *Galen*, because they are not so well read in the true, sound, and ancient peripatetic Philosophy, as to understand them; for *ubi definit physicus, ibi incipit medicus*, the better philosopher, the better Physician; and 'tis from such ignorant persons, that as *Dr. Manwaring* sayes, If an account could be taken of the dead, we find more have dyed by Medicine, than the Sword; but, as he sayes, *Populus vult decipi*, they love the imposture, they will not be informed; so *decipiatur*, let it go on, they are his own words. Now wholly to conclude, assure thy self, That the best *Galenists*, are the best *Chymists*. But whether it be so proper for the Physician to make up his own Medicines, or no, is a question too long for this place.

The

The Manner how to make Reports.

FOrasmuch as upon divers occasions, the Artift may be called to deliver his opinion, either of the death of any Person, or of the weakness and depravation of any member, in the Function, or execution of its proper office and duty, &c. to a Magistrate or Coroners Inquest; I have taken out of *Ambrosius Paræus*, and others, these following Rules.

Let the Artift be careful in searching Wounds brought to him, and let the Patient be placed in the same posture he was in when he received the hurt; otherwise a Wound may seem by the Probe to be small, when indeed it is mortal. If he be doubtful, let him suspend his judgment from the first day to the ninth, by which time the symptoms will manifest the condition of the Wound.

The general Signs whereby we judge of diseases, are diagnostic, prognostic, or amnesthic, and they are taken, 1. From the nature and essence of a disease. 2. From the three sorts of Symptoms; which are,

1. Action hurt, and that may be either demolish'd, diminish'd, or deprav'd.

2. From the Excrements, which offend either in substance, quality, quantity, manner or time.

3. From

3. From the quality chang'd, of touch, smell, color, &c. which depend of the diseases and symptoms.

4. From the causes.

5. From the disposition of the body.

6. From things helping and hurting.

7. From similitude and dissimilitude, where are to be compar'd evils universally raging, as Plague, &c. of all which thou hast account before.

If a Nurse, through drowsiness, or negligence, lie upon her Infant in Bed with her, and stifle it to death; if the Infant were in good health before, were not froward nor crying; if his mouth and nostrils now dead, moistned with a certain foam or froth; if his face be of a violet color; if when the body is opened, the lungs be found swoln and suffed, and all the other intrals sound; it is a token that the Infant was stifled by some outward violence.

If the Body or dead Corps of a Man be found lying in the Field, or House alone, and be questioned whether he were slain by lightning, or some other violent death, these signs following will shew the certainty there-

For every Body that is blasted, or stricken with lightning, doth cast forth an unwholsom sulphureous smell, so that the Birds, or

O

Fowls

Fowls of the Air, nor Dogs will not touch it, much less feed on it; the part that was stricken oftentimes found, and without any wound; but if you search it, you shall find the bones to be bruised, or shivered in pieces.

But if the Lightning hath pierced the Body, making a wound, (according to the Judgment of *Pliny*) the wounded part is far colder than the rest of the Body. For Lightning driveth the most thin and fiery Air before it, and striketh it into the Body, by which force the heat that was in the part is soon dispers'd, and consum'd. Lightning doth alwayes leave some sign of Fire, for no Lightning is without Fire.

Moreover, whereas all other living Creatures, when they are stricken with lightning fall on the contrary side, onely Man falleth on the affected side, if he be not turned with violence toward the Coast or Region from whence he came.

If a Man be stricken with lightning while he is asleep, he will be found with eyes open contrariwise, if he be stricken while awake (as *Pliny* writes.)

Also it may be inquired, whether any thing is dead by a wound, receiv'd it live or dead. Truly the wounds that are made on a living man, if he dye of them, after his death will appear

appear red and bloody, with the sides or edges swoln, or pale round about: contrariwise, those that are made in a dead man; for all the faculties and functions of life in the Body do cease, and fall together by death, so that thenceforth no spirits nor blood can be sent, or flow unto the wounded place.

The like question may be when a man is found hang'd, whether he were hang'd dead or alive? If he were hang'd alive, the impression or print of the Rope will appear red, pale, or black, and the skin round about it will be contracted or wrinkled, by reason of the compression which the Cord hath made; also oftentimes the head of the *Aspera Arteria* is rent and torn, and the second spondile of the neck luxated, or moved out of his place; also the legs and arms will be pale, by reason of the violent and sudden suffocation of the spirits: moreover, there will be a foam about his mouth, and a foamy and filthy matter hanging out at his nostrils, being sent thither, both by reason that the lungs are suddenly heated and suffocated, as also by the convulsive concussion of the brain, like as it were in the Falling-sickness: contrariwise, if he be hanging dead, none of these signs appear.

Whosoever is found dead in the waters, his belly, that was thrown in alive, will be swol'n and puffed up, by reason of the water that is

contain'd therein ; certain clammy excrements come out at his mouth and nostrils, the ends of his fingers will be worn and excoriated, because he dyed striving and scraping in the bottom of the River, seeking somewhat whereon to take hold to save himself from drowning. If he be thrown into the waters, being dead before, these Signs appear not.

But as concerning the Bodies of those that are drown'd, those that swim on the upper part of the water, being swol'n or puffed up, are not so by reason of the water that is contain'd in the belly, but by means of a certain vapor, into which a great portion of the humors of the body are converted, by the efficacy of the putrifying heat. Therefore this swelling appears not in all men which perish, nor are cast into the waters, but in them which are corrupted with the filthiness, muddiness of the water, a long time after they were drown'd, and cast on shore.

Many are suffocated by burning Charcoals in a close Room, and sometimes recovered, if taken in time, else quite smother'd. These you shall perceive their faces wan and pale, no pulse beating, all the extream parts cold, speech and motion cease, so that there is little hopes of recovery, only as thus, put your hand to the region of the heart, and if you find any heat and pulsation, then there is life remaining,

maining, else not ; therefore if any person's found dead in a close Room, you shall inquire whether there were any Charcoals burnt there, or observe whether the walls be new white lim'd , and the cause of their deaths will appear.

You shall know that a Person is poyson'd, when as he complains of a great heaviness of his whole Body, so that he is weary of himself; when as some horrid and loathsome taste sweats out from the orifice of the stomach to the mouth and tongue, wholly different from that taste that meat, howsoever corrupted, can send up ; when as the color of the face changeth suddenly, sometimes to yellow , or any other color , much differing from the common custom of man ; when nauseousness, with frequent vomiting, troubleth the Patient, and that he is molested with so great unquietness, that all things may seem to be turn'd upside down, when the Patient swoons often, and with cold sweats.

Those Poysons which are hot, cause a burning in the tongue, mouth, throat, stomach, guts, and all the inner parts, with unquietness, and perpetual sweats ; but if they be accompanied with a corroding and putrifying quality, as *Arsnick*, *Sublimate*, *Roseager*, or *Rats-bane*, *Verdigrease*, *Orpiment*, &c. they cause in the stomach and guts intolerable
O 3 pricking

pricking pain, rumblings in the belly, and continual and intolerable thirst. These are succeeded by vomitings, with sweats, sometimes hot, sometimes cold, with swoonings, whence sudden death ensues.

Poysons that kill by cold, induce a heavy sleep, or drowfiness, from which you cannot easily rouse them; sometimes they so trouble the brain, that the Patients perform many undecent gestures, with their mouths and eyes, arms and legs, like such as are frantick; they are troubled with cold sweats, their faces are blackish or yellowish, alwayes ghastly, all their body is benum'd, and they die in a short time, unless they be helped: Poysons of this kind, are *Hemlock*, *Poppy*, *Night-shade*, *Hembane*, *Mandrake*, &c.

Poysons that are moist, induce a perpetual sleep, flux, resolution of all the nerves and joints, so that not so much as their eyes may be faithfully contained in their orbs, but will hang as ready to fall out; the extreme parts, as the hands, feet, nose, ears, putrifie, then death is at hand; of this kind are the bitings of *Serpents*, the *venenate* and *putrifying humidity* of the *Air*, &c.

Being to make report of a Child kill'd with the Mother, have a care that you make a discreet report, whether the child were perfect in all the parts and members thereof, that
the

the Judge may equally punish the Author thereof.

The way of making Reports, is this:

[A. B. Chyrurgion of London, being called this 10th of August instant, to visit T. W. I found him in his Bed, wounded on his head on the left temple, piercing the bone with a fracture, and depression of the bone into the meninges and substance of the brain, by means whereof his pulse was weak, he was troubled with raving, convulsion, cold sweat, and his appetite was depressed, whereby may be gathered, that certain and speedy death is at hand.

In Witness whereof, I have hereunto set my Hand.

This, if thou art ingenious, may be a pattern for all, only looking back to what hath been said before, of the Signs, Causes, and Symptoms of Diseases.

Of Bleeding at the Nose.

BEcause many places are stuff'd with a sort of Quacks that profess themselves Physicians, and take to themselves the

Title of Doctors, who, when they come to a Patient, cannot discover their grief, unless it be apparent to their eyes, much less cure it: that I might save the lives of divers people, I shall set down some Rules for the Cure of this lamentable grief.

The Blood that nourishes the brain, and flows from the nostrils, is wholly arterial, and most pure; 'tis caus'd either by *Anastomasis*, 1. Opening of the vessels, from the weakness of the vessel, plenty and thinness of blood; *Diæresis*. 2. Separation, from a wound, contusion, rupture, rofion. 3. *Diapedesis*, transcolation, resudation, from the tunic being rarified, and blood attenuated. The external cause is known by relation, plenty, and bad quality of blood, shew *plethora*, or *cacochymia*. If critical, signs of coction appear, or a critical day, and the Patient is eas'd. If it flow too much, swooning, dropsie, &c. at last death may follow. For the Cure, let his dyet be thickning and cold, begetting good juice, and of easie concoction. If it be critical, 'tis not presently to be stop'd, especially in a *plethora*.

But the symptomical bleeding at the Nose is to be stay'd, which is done, by pulling back the blood flowing to the nostrils; by repelling it from those and the neighboring parts, by shutting the open orifices of the veins, by
check-

checking the preposterous motion of the blood, and by evacuating and correcting the sharp and thin humors, mingled with the blood causing the flux, and stopping their growth, and by strengthening the retentive faculty of the liver and the veins; to all which do prevail very much these Rules following.

The pulling back of the blood must be done as soon as can be, before the spirits be too much weakned, and this by opening a vein in the arm on the same side the blood flows, taking little at a time, and often; and you shall make a large orifice, if you find the Patient strong; and if you find the flux stay not with this, and the following remedies, open a vein again, then cut the foot vein.

After opening a vein, or before, let there be used friction, and binding of the extreame parts, and large Cupping-glasses fastned upon the shoulder and *hypochondrium* of the same side, or both, if both nostrils bleed; *Galen*, with these, commends opening the pile-veins; *Forrestus* bids fix Cupping-glasses to the feet, without scarification.

Some fasten Cupping-glasses to the two-headed muscle of the arm.

Crato, in his counsels, propounds the clinching close of the little finger of the hand, of the same side.

Swooning is one remedy, it draws the blood and spirits inward, and cools the whole body.

Zacutus Lusitanus reports, he cur'd a flux, when all remedies fail'd, by applying an actual Caustery to the sole of each foot.

The aforesaid attractives not prevailing, we must come to things that repel, which may be applied to the forehead and temples, behind the neck, and upon the carotide arteries, as *pul. thuraloes with bares-hair, & alb. ovi*, dipping flax herds in *alb. ov.* then lay the pultis upon it, and so apply it, from one temple to the other along the forehead; or only *bol. armen. alb. ovi. acet.*

A sure Medicine is made of plaster and vinegar two fingers thick; and if the first stay it not, then apply another.

Amatus Lusitanus praises a Cap made of such astringent things, and *oxycrate* to be put upon the head, being first shaven; in great extremity may it be try'd.

It will be good also to bathe the forehead, arteries, temples, &c. with cold water, or *oxycrate* with cloths wet in, and removed as soon as they begin to heat, and then wetted and apply'd again: or a Bath made of juice of *Plantain, Knot-grass, Horse-tail, Shepherds purse*, and the like, with a little vinegar, to make it pierce the better. But the head must

the not be fomented, nor astringents apply'd, till
the sufficient revulsions have been us'd, lest the
flux, blood too suddenly forc'd back, cause a
ctu- greater flux, or else by suddenly staying, a
convulsion, apoplexy, shortness of breath,
&c.

ling, Apply Vinegar alone to the forehead, &c.
may or a wet sponge in it, and put into the no-
be- strils, about a porrenger full at a time, with a
arte- good dash; and a little while after another,
alb. and so with intermission.

lay The casting cold water into the face, doth
one not only repel the blood, but doth retract it
; or to the inner parts, by reason of the fear,
which will be apt to arise thereat.

and Also *Oxycrate* held in the mouth, and often
first chang'd, keeps blood from flowing into the
throat.

e of Vinegar also syring'd into the ear of the
put bleeding side, is good.

great Besides these things that repel, we must
think of such as conglutinate, putting into
thead, the nostrils *pul. thuraloes*, &c.

, or Also some much commend the blowing of
d as powders into the Nose, as the ashes of egg-
etted shells, of paper, &c. but observe whil'st this
juice is in doing, the Patient must hold his mouth
berds full of cold water, to stay the medicine from
, to coming into his mouth.

not Also the cotton of an Ink-horn, crush the
Ink

300 *VADE MECUM*: Or,
ink a little out, make it up into a tent, then
put it into the bleeding nostril.

But if for all these Remedies the flux stays
not, then we must use *escharotics*; but great
care must be had, lest at the falling of the *eschar*,
bleeding begin afresh: the best is *burnt*
copperas; for besides cauterizing, it stays the
flux.

If you will have it milder, mingle your
copperas, thus:

Rx. Galls lbss. Alum ʒ iv. calcine them, and
make them into powder to be blown into the
nostrils.

But such as stay the flux by cooling and
thickning, are made of cooling and binding
emulsions, juleps, conf. elect. troches, &c. as be-
fore.

You shall also use outward Remedies to
cool the blood, as bathing the arms and put-
ting the feet in cold water, fomenting the
stones and back with water and vinegar.

But when we have tryed all these, and the
grief be rebellious, then we must use *narco-*
tics, which stay all manner of fluxes from
what humor soever, and that quickly; the
chiefest of these is *Laudanum*, given to *gr. iii.*
or *iv. in aq. plantag.* the body being made
soluble; but have a great care you give it not
to one that is over-weak, lest the natural heat
be overcome. *Syrup of Poppies* is good,
dose

dose \mathfrak{z} i. in an astringent *Julep*, to Bedward.

The *Juice of Nettles* snuff't into the Nose, and \mathfrak{z} iii, or iv. taken inwardly, and the herb laid pultis-wise to the forehead, temples, &c. is very good.

Rx. *Hogs dung powder'd* \mathfrak{z} iii. powder of *Roses* \mathfrak{z} ss. mix them with the juice of *plantan*, and with *cotton*, make tents for the nostrils & *Asses dung* so us'd, is very good.

Some take the blood that flows, and fry it, and give it to eat unknown.

Spikenard made into fine powder \mathfrak{z} i. at a time, or *plantan water*, doth stay the bleeding.

Whil st these things are doing, we must see whether there be any thin, ferous, or cholerick humor mix'd with the blood; if there be, it must be purg'd out, if not at once, then oftner, thus :

Rx. *Tamarinds* \mathfrak{z} ss. *plantan leaves* M. i. boil them in *aq. font.* \mathfrak{z} vi. close cover'd to iv. strain it, and put to it *rhubarb* sliced, \mathfrak{z} i. *yellow myrabolanes*, \mathfrak{z} ss. *spikenard gr.* viii. infuse altogether 5 or 6 hours, strain them, and add *Syr. rosar. sol.* \mathfrak{z} i. *rhubarb powder'd*, \mathfrak{z} i. *P. potio. pro i. dose.*

In a bleeding that is ancient, and uses to come upon the Patient often, let him take this Purge, at least once a week, and betwixt every

every Purge astringent, *Opiats* or *Juleps*, &c. as thus :

Rx. Roots of *Bistort*, great *Comfrey*, an. \mathfrak{z} i. leaves of *plantan*, knot-grass, rupture-wort, fumitory, an. *M. i.* the four great cold seeds, an. \mathfrak{z} i. boil them *q. s. aq.* to *lbi.* in the straining, dissolve white sugar \mathfrak{z} iii. for three mornings.

In stead of *Juleps* and *Opiats*, after they have taken them often, they may use now and then a Syrup made with equal parts of Sugar, and the juice of nettles, taking every morning a spoonful.

If the flux proceed from the over-much heat of the spleen, or the reins, then apply cool things to those parts.

To all these, to strengthen the inward parts, let his dyet be thickning, as Calves-feet, Sheeps-feet, New Cheese, Rice, and the like; his Fruits must be sowre and binding, as Pears, Quinces, Medlars, Services, Conserve made with juice of Pomegranats, Limons, Oranges, Sorrel, &c. let him abstain at first, whil' st he is strong, from flesh meats, &c.

If he be weak, give him some flesh Broths or Ponadoes, in which is boiled white starch made pure without lime.

For his drink, give him water wherein steel hath been quenched, and in such water let all his meat be boil'd, having first boiled in it some Nettle-roots.

Let him keep himself as quiet as can be, neither walk, nor speak, nor cough; for the stirring of his tongue and jaws increase the flux.

Let his face be cover'd, and his eyes clos'd, that he see not the blood, for meerly conceit oftentimes moves the blood to a greater flux.

Let him avoid immoderate watching, for that will render the blood sharp, and more fluid; sleep tempers the humors, and stays any manner of flux.

Finally, Let him shun passions of the mind, as Anger, Laughter, Joy, &c.

A N A P P E N D I X.

Rules for Bleeding and Purging, &c.

Phlebotomy is practis'd in five Cases:

1. To evacuate in a *Plethora*, and Inflammation.
2. To draw from the part affected, as months suppress, &c.
3. To revel, derive, of which before, all this *per se*: For,
4. It cools, but by accident.
5. To preserve, by hindring fluxions, and inflammations, Spring and Fall, for divers other

other griefs; every vein evacuates more or less; the veins in the arm vacuate from the head, and parts below the neck; the *Saphena*, helps those parts that are lower, as the bladder, womb, &c. and all parts below the reins; but the veins, hæmorrhoids, months, are cur'd by cutting the upper veins; but if they are obstructed the lower. Arteries are rarely cut, because of danger; and if the *Virtuosi* could invent a way to open them as safely as veins, they would oblige Mankind for ever. The middle age bear *Phlebotomy* best; yet in necessity any age, but sparingly; therefore *Galen* lets not blood for prevention till 14, nor after 70; by reason of debility, and defect of blood; but if they have much blood, strong, and disease require, they may phlebotomize, as *Avenzoar* let his Son blood but three years old. The habit is likewise to be look'd to, for those that have large veins, not too lean, nor whitish, of tender flesh, may bleed more, the contrary less; so that 'tis more proper for Men, than Women; in Spring and Autumn, 7. *Aph.* 54. than Summer and Winter. The same of Regions; hot Air dissipates the spirits, and humors; cold, *contra*, cools more one that hath lost blood; but upon necessity let blood in any place and time. For preservation, in the morning, an hour after Sun-rising. In great diseases any hour, and

and in the beginning, and any time of the
disease. If he hath used a full dyet take
boldly, else sparingly. Sometimes you may
let blood *ad animi deliquium*, 1. Aph. 23. in
great burning Fevers, because it cools the bo-
dy, moves the belly, and sweat. In great in-
flammations, it lessens blood, and hinders its
motion to a noble part. Lastly, 'tis a reme-
dy for the greatest pains, so that it may be al-
most call'd *maximum remedium*; but this
animi deliquium is a deceitful measure, for
some faint presently, others not, though they
bleed too much, so that 'tis safer to keep
within bounds, and repeat it.

To *Phlebotomy*, belong *scarifying* and *cup-*
ping, of which before, only note, this with-
out that discusses winds, evacuates insensibly,
staves bleeding, vomiting, months, 5. *Aph.*
50. Small ones serve after evacuation, they
hurt in the beginning of inflammation and
plethora's; they evacuate much apply'd to the
arms, hams, buttocks, &c. and scarified, to
revel, attract, &c. in acute diseases, fluxions
of the eyes, diseases of the head and breast:
Their effects are in a mean, between bleeding
and leeches; bleeding draws from the pro-
found parts, cups those nigh the skin; leeches,
those between the profound and skin. If the
blood be gross, foment the part well with
warm water, before you fix them, but of these
before.

Leeches

Leeches belong to bleeding too, they wound the skin with a triangular bite, they are used where cups cannot, as in the gums, lips, arms &c. if you let not the blood flow after they are taken off, in the hæmorrhoids you will not find such great wonders from them, for my ever honoured Master, Dr. *Patin*, was wont to say, *That they are little cunning Animals, and suck the purest and finest blood, and leave the gross.*

Apply them not, till you have kept them fortnight, or three weeks, in fair water, changing it every third day, then take them in the middle with a clean cloth, and apply them if they will not bite, wash with a little warm milk the part, or a little Pidgeons blood, or scarifie it a little; if you would have them bleed more, cut off their tails; if you would have them fall, rub their head with aloes, or salt, an argument they suck sweet blood, when you would stay the flux, apply a cleft bean, or tinder, and bind where you may. After they are taken from the hæmorrhoids, let the Patient sit over a basin of hot water, and you may have as much blood as you will.

Purgation is an evacuation of humors, that offend in quality, *Gal.* in 2. *Aph.* 1. by quality here you must not understand simple heat, cold, &c. for then alteration would suffice, but a cacochymic species, or redundancy of humors

humors inept for nourishment. *Sitalia pur-*
gari, qualia purgari oportet, confert & facile
est, 1. Aph. 2. Sin minus contra. Now
 according to the three Regions of the body,
 we are to order your Purges; the first Re-
 gion, from the invention of the circulation of
 blood, is the intestines and stomach; the
 2d takes in all kind of vessels, including the
veins and *capillaris*; the 3d includes what
 is without the vessels; yet the method still
 remains inviolable: that to the first you must
 use lenient, to the 2d cathartics, to the third
 the strongest and sudorifics. Purging is either
 by vomit or dejection, gently, meanly, or
 vehemently, and taken at mouth, or *anus*, as
 clysters, &c.

But let those who vomit, be easily urg'd,
 and accusom'd, having a large breast,
1. Aph. 6. Hippocrates counsels to vomit
 two dayes together, for the second carries off
 the reliques, strong ones empty the liver and
viscera, gentle the Stomach, proper in Parox-
 ysms, and at other times.

Dejection, is proper for the sick and neuter,
 not sound, unless very gentle, *2. Aph. 36.*
Aph. 16. nor old, nor infants, but by nurse, or
 suppository, &c. the Ancients open'd passages
 by moistning meats, clysters and baths,
Aph. 13. &c. thick humors are to be at-
 tenuated, *2. Aph. 9.* thin need no prepara-
 tion.

tion. Purge not in the beginning of a disease, till you see signs of concoction, unless humors be turgent; *i. e.* mighty unquiet and malignant, lest they fall upon some noble part. For *coctia purganda, non cruda*; no concoction is an action of the natural heat upon passive qualities, and 'tis either of meat, and humors for nourishment, or of morbid humors; that is natural, this partly natural partly preternatural; for the humor, being not altogether benign, nor wholly strange, is not fully overcome by heat; so that they must be such, as hot syrups, &c. that concoct, can but prepare: *venesection*, gentle cathartics altera- tion by contraries help preparation; ferrous humors cannot be concocted; hot syrups &c. help concoction, (but concoct not themselves) by cherishing the heat, which concocts after; the same of hot wine, meat and drink, &c.

2. Look to the nature of the disease, which the humor indicates, as a cancer from *atrabilis*, a tertian fever from bile.

3. The habit of body: thin, extenuated, cold, dry bodies, &c. are sparingly, not at all to be purg'd. Women with child are not to be purg'd, unless from the 4th month to the 7th.

4. The Air, for too hot, or too cold, is hurtful; in a hot season bodies are less apt to purge;

4. *Aph.* 5. before and after the dog
edications are difficult, because the spirits
exhausted by heat, which is augmented by
angers; heat draws to the circumference,
medicines to the centre. In Winter, hu-
ors are scarcely mov'd, because cold den-
es; Spring is the best, then Autumn; the
me of a temperate Region, &c. yet if ne-
ssity, purge at any time, even upon a criti-
day, if judgment be not then expected;
Hippocrates purg'd the 7th, 14th

5. Know whether he formerly used a bad
et, as in Famine or War, then you must
urge by degrees; *interim* nourish with good
eats: so those use much exercise, need little
urging; or those apt to vomit, &c. *Dejection-*
non sunt numero estimandæ. Beware of
strong, or too gentle evacuation; strong
weakens, hurts the Stomach, 2. *Aph.* 3. cau-
s convulsion, and other bad symptoms;
gentle, *movent sed non promonent*, causes gri-
ing, &c. According to Galen, Phlebotomy
ought to precede; *ubique majoris utriusque*
residui equalis occurrit necessitas, à venesectione
auspicanda curatio; but some premit a cly-
er, which is call'd *purgatio minorans*, to re-
move the impurity of the first region, lest it
should take place of the vacuated blood; 'tis
good that the rest may be the easier concoct-
ed.

ed. Purge not in a Paroxysm, unless in quants, and chronics, and strong men; for the thick humor is easier purg'd when 'tis mov'd you may sleep a little after a strong one. The place affected, and inclination of the humor shew by which wayes you are to purge, as the head by the mouth, nose, &c. the whole body by the intestines, the Stomach by vomit, and belly, taking heed alwayes of purging by the part affected, as in the head affected by sympathy, beware of vomiting, but reel downwards. Lastly, if symptoms vanish, and thirst follow, the Purge was complete.

Purgers by *Urine*, separate the blood and *serum*, are proper in diseases that occupy the veins and gibbous part of the liver, so let the humor be little or mean, else 'tis to be evacuated *per alvum*, unless nature inclines to the reins, and it be concocted; for they irritate crude humors, unless very gentle, which may be taken with meat, as *sem. melon.* &c. *creberrim.* Beware them if the urinary wayes be ulcerate, &c. then purge first; they hurt and suppress'd urine, and cutaneous diseases, and hot, dry, tabid bodies, and obstructions, before purging, but wonderfully profit women in flux, proper rather in the declension, than in other times; coction is not less necessary here than in purging *per alvum*.

Sweating is good in pestilent Fevers, and

ther diseases ; to evacuate hurtful humors
out the habit of the body, or in the veins,
not in the Stomach, or Guts ; taking heed it
not immoderate, lest it weaken, 6. *Epid.*
2. *Aph.* 21. in a hot constitution, time,
not diseases, and meagre, abstain from the
water, give them fasting, after purging, un-
less the disease be malignant. My ever ho-
noured Master, Dr. *Patin*, sayes, it purges on-
ly *Serum*.

Baths are prescrib'd warm, by *Avicen*, to
hot, dry tempers, if universals heat preceded,
in declining of a Fever ; it opens the pores,
moistens, resolves the relicts of humors ; if
thin and few, in the habit of the body, &c. as
in sweat ; too hot, *è contra*. They are natu-
ral as *thermæ*, or artificial ; all *thermæ* heat,
and dry, salt, nitrous, sulphurous, bitumi-
nous, are for cold and moist diseases, as *Gout*,
Ralsie, *Asthma*, *Catarrhe*, *Dropsie*, *Ulcers*, *Scabs*
hard Spleen, *Liver*, *Womb*, &c. *Aluminous*,
for spitting blood, vomit, hæmorrhoids, too
many months, abortion, too much sweat ;
iron and calcanthous for the Stomach,
Spleen, Reins, *Ulcers*, &c. they help all parts
they touch mediately or immediately, not for
people in health ; enter the Bath naked, or
with a shirt, &c. the head well cover'd.

A temperate Bath may be us'd any time, a
not only in the Spring, and beginning of Sum-
mer ;

mer ; early, or presently after Sun-rise ; at evening, two hours before Sun-set, after general evacuation ; because it only evacuates thin humors, leaving the thick ; time of stay, according to the Patients bearing, less in the beginning ; after longer, to two hours ; for 20 or 30 days, or more : the Clay is good for the same effects, but to be wip'd off with the same, or hot water.

The *Artificial* supply the natural, by dissolving *Sal, Sulphur, Nitrum, &c.* A Bath is also made of hot or temperate water, the last for children, old people, women, tabid ; it moistens, loosens, softens, attracts aliment, helps scabs, weariness, itch, pains, winds, melancholy, heaviness of the head, watchings ; long stay resolves and dries, shorter softens and strengthens ; hurts with a full belly, and plenty of crude humors ; or weakness of a principal part.

A cold *Bath*, though it may profit by *Antiperistasis*, strengthen fleshy men, stay flux ; yet it hurts children, old men and meagre ; Baths may be made also of oil, milk, wine, &c. of the nature of which simples they partake. *Pliny, 5. Ep. 6.* recites divers parts of an artificial one, which are not us'd with us.

Mineral waters are us'd to be drunk also, they are hot or cold ; believe not that those which wash solid metals, as Gold, Silver, &c. can

can obtain any thing from them. They par-
 take of the spirits of metals, or those mine-
 rals which may be dissolv'd in water, as the
aluminous, nitrous, calcantious, which are be-
 liev'd to be iron, but *calcantium* is the origi-
 nal of brass and iron. *Bitumen* and *Sulphur*
 swim a^d top whence the water is unctuous,
 of a clayish color, it softens and opens. *Ni-*
trous are of a sharp taste, loose the belly, dry,
 astringe, akin to which are the saltish. *Alu-*
minous are known by the taste with binding,
 they cure ulcers, and fluxes. The sharp taste
 shew the *calcantious*, good in all obstructions;
 some consist of two or three minerals, as *Sal,*
Sulphur, Alumen. They are to be taken in
 great quantity, proceeding by degrees; con-
 sidering the nature and age of the Party, first
 take *℥ ii.* ascending to *℥ v.* or *vi* not all at
 once, but between 2 or 3 hours space, every
 hour repeating the dose twice or thrice; if
 the water be cold, drink no fresh, till that first
 be warm'd, and no heaviness perceiv'd; they
 force a way by their plenty by siege or urine;
 yet to promote operation, some add opening
scraps, limon, byzant. capil. vener. &c. or so-
 mative, *sal, manna. pouders diacartham. &c.*
 walk after every draught, not to sweat, sup-
 per larger than dinner, drink White-wine or
 Ale; if they work not, use cathartics and
 clysters, as *jalap. sem. ebul. &c.*

Of particular Evacuations before: only note, *Errhina's* hurt diseases of the eyes, ulcers and tumors of the nose; as *Sternutatories* in *vertigo* and *epilepsie*; so *Masticatories* and *Apophlegmatisms*, of the Mouth, Stomach, Breast, by drawing humors to the parts.

For *Bechics*, they hurt in inflammations, ulcers, and tumors of the breast and lungs; but are good to evacuate *pus*, to cut humors if thick, and bring them to mediocrity if too thin. By the palate, not only the breast, but the whole body is emptied by quick-silver.

If he vomit too much, give milk boil'd with bread, or *mastich*; smell of a toast in vinegar, bind and rub the extreme parts; or first apply *empl. à crust. panis*, or a pultis of leaven and mints; or fix a cup to the bottom of the Stomach, give *syr. menth. absinth. &c. diacalaminth. arom. ros.* a powder of coral. corn. ceru. *ust. menth. last theriac.* or one pill of *laudan.*

If he vomit not within an hour, or so, after taking it, give him a 4th, 3d, or half of same, or some other he took before.

If one purge too much, stay it not suddenly, but give lubricating, lenifying, thickning things, as *mucilag. sem. cidon. psyllii, malv. gum. tragac. aq. bord. tepid*, or any tepid water; if blood come, *Rx. ol. amygdal. dul.*

Here

Here your *Chymists* cry up their preparations as the best, because, say they, they continue the belly loose for three or four dayes after; for which I like them the worse, because by their too fiery nature, if given by ignorant hands, they prey too much upon the *humidum radicale*, and cause a colliquation.

Thus much for the Rules the young Artift ought to observe in administering the *maxima & generalia remedia*.

A N A T O M Y.

TO enumerate its Antiquity, Progress, and Excellency, would be needless, being all have it in great veneration, except your *Quacking Chymists*, who have been sufficiently reprov'd in all Countries, and by several in ours, last of all by the learned Pen of *Dr. Goodall*, who, I may say, *Hic murus abeneus esto*; as old as *Jacob*, *Gen. 52.* and other places in the *Jewish Law*, *Eccles. 12.* all *Homer's Poetry* flows with flourishes of it. Its utility to all, besides Physician, Chyrurgion, Apothecary, I shall wave, save the two last. To the Chyrurgion 'tis absolutely necessary, for if ignorant herein, he may commit mortal errors; and how can the Apothecary apply topics by the Physicians order, if

he know not the site of the parts? so that you see as divine *Plato* would let none enter his School of Philosophy ignorant of Geometry, so none the School of Physic if ignorant in Anatomy; which is the basis of Physic, and if unknown or neglected, the whole Fabric must needs come to ruine.

'Tis an exact artificial dissection of a body,
 1. In general, into the trunk; *i.e.* head, breast, belly and limbs; wherein you see a bone, cartilage, ligament, membrane, fibre, vein, artery, nerve, flesh, fat; similar parts, of which the dissimilar are made; compound, as the heart, &c. more and most compound, as hands, and limbs: of all which in order.

A Bone is a most cold, dry, earthy, hard part, made to be the pillar and defence of the other parts. A gristle is softer than a bone; in old men sometimes it degenerates into one; they are plac'd about the ends of bones, glud to them for their conservation and easie motion; yet some are separated, and make a separate body, as those of the lower jaw, the articulation of the clavicles, the sternon; articulation of tibia and femur; besides those of the larynx, and wind-pipe; others prop up soft parts, as the nostrils and ears.

A ligament binds the bones together; softer than a gristle, harder than a membrane.

A membrane, or coat, is soft and dilatable, the

the covering of other parts, or the receptacle of something, as the *stomach*, *bladder*, *gall*: therefore 'tis properly a *tunic*, if it make a hollow body; if it embrace a solid body, a *membrane*.

A *fibre*, is a thred stretched over a *membrane*, or interwoven for its strength; according to its various site upon it: 'tis divided into *right*, *oblique*, and *transverse*; not only for their mutual help, but to strengthen the *membrane*; from every one 'tis thought is performed an action; as the *right* draws, *transverse* reteins, *oblique* expels; which absolutely depends on the inbred faculty of the part, which, as it hath violent dilation, so hath it spontaneous and natural contraction, by reason of the *fibres*.

A *vein* is a membranous vessel, round and fistulous, allotted to contain and conduct blood through the whole body.

An *artery* is a pipe of the same membranous nature, but a little harder and thicker, design'd to contain and distribute up and down the arterious blood.

A *nerve* is a pipe made to carry animal spirits, which becaule 'tis most subtile, therefore the cavity of this pipe is so small, that 'tis not discernable. *Flesh* in dissimilar and organical parts, where a bone is wanting, is the foundation of the other parts, and makes the chief

part of corpulency ; 'tis soft, thick, concreted, and concocted of blood only, if red ; or of blood and seed , if white: *viscerous* and *musculous*, very red ; *membranous* and *glandulous*, white ; for every substance of the bowels is call'd flesh, or *parenchyma*, a congelation of blood. The thicker substance of certain membranes which are the conceptacles of something, which by dilating and contracting their body, ought to draw, retein, and expel, is also call'd flesh, or flesh-like substance: the thick spongy substance of the *glandules* , is call'd flesh ; but chiefly the substance of the muscles deserves the name of flesh. The fat, though it appear, all the parts being finish'd, and in a big child, and grow to the parts themselves ; because in the composition of organic parts, it oft concurs to make the bulk ; my ever honored Master, Dr. *Riolan*, numbers it amongst the similar parts: 'tis the thinnest part of blood, fat and oily, sweating out of the veins through their tender coat, and hardning about other membranes ; 'tis twofold, with *Aristotle* Prince of Philosophers, softer, outer, harder, inner ; *i. e.* *Pimele* and *Stear*. Grease and Suet.

Of these you will hear mention often made in explication of the dissimilars , though in some places they exist a part , not join'd to others to make an organ, but are consider'd

according to their peculiar uses. Yet are united in organic parts, to perform action, or for use; and according to the various offices they execute to effect action, are divided into four orders; for in every organ there is the chief part, by which action is perform'd, another without which it cannot be done; a third, by which 'tis conserv'd: But in every organ the chief part ought to be similar, and proper to it, such as is not found in any other; which similar cannot officiate alone, if not helpt by others, therefore the consent and union of others is necessary; wherefore every moveable action properly belongs to an organic; none, unless alteration, to a similar, to which, besides the composition of an organ, belongs only use, which it contributes to perfect organic action. So from the dignity of their action, organics are divided into 1. principals, which supply the whole body with matter and faculty; with Physicians they are 3. *Cor.* *Cerebrum*, *Jecur*. Aristotle held but one, *i. Cor.* King of all; the rest are 2, *ministring* and *subservient*.

Now exactly to investigate the structure of every part, observe its *name*, *substance*, *temper*, *origine*, *site*, *quantity*, *number*, *figure*, *color*, *connexion*, *communion*, *action* and *use*. Connexion differs from communion; for connexion is an adhering of a part to its neigh-

bor, be it one or more, of which it depends; which is sometimes taken for the origine of the part it self; yet in some parts origine is distinguish'd from connexion: But communion with parts nigh or remote is universal, by veins, arteries and nerves, by whose intervening all parts communicate with one another; or particular, when any part communicates with remote or nigh parts, by peculiar pipes; so the gall communicates with the liver, and *duodenum* by bilious passages; the reins and bladder, by the ureters, with one another.

Order of doctrine begins with the bones, but dissection with the belly, in Greek *Coilia*, because hollow; sited from *costæ notæ*, or *diaphrag.* to *os pubis*; hath three Regions, upper, *Stomachal*; middle, *Umbilical*; lower, *Hypogastric*. The sides of the upper are *Hypochondria*, of the middle *Ilia*, the lower the *Navel*. Sides of the *Hypogastric* are *inguina*, the middle *etron*, the lower *pubes*. Divided by *peritonæum* into greater cavities, which hold the nutrient parts; and the lesser the bladder genitals in men, and womb in women, which bare no child. Hath parts conteining and contein'd; the first proper, common, and diverse; common, *cuticula*, *cutis*, *membrane*, *adiposa*, *carnosa*, & *communis musculorum*; proper, the *muscles* and *peritoneum*; diverse, because

cause refer'd to other place and use, are partly fleshy, partly bony, as *vertebræ lumborum*, & *pelvis*, and *muscles* as hereafter. The contain'd are nutritial, and genital; 'tis knit outwardly to the breast and lower limbs, by the skin; inwardly by *peritoneum*. It presses the parts contain'd to expel excrements up and down, and force the child.

Cuticula first appears, like the peel of Onions, *efflorescentia cutis*; next *cutis*; of an exquisite temper, porous for insensible transpiration; immoveable save the forehead, not in Beasts, and the Elephant kills Flies, moving his skin; rids sweat, and fuliginous filth. Then

Membrana adiposa, sticks close to *cutis*, and *membr. carnos.* save in forehead, cods, and yard; warms in Winter, cools in Summer: under it is *membr. carn.* obscure in aged, in brutes 'tis next the skin, by which they often move it, rigor comes from it. Next *membran. commun. muscul.* thin, yet strong, compassing them like a girdle.

Before the muscles of the belly are treated of, the general doctrine of them is to be premis'd.

A muscle is an instrument of voluntary motion, depending on our will; and because it governs the action, 'tis dissimular, compounded of many similars, in which flesh predominates; yea, by flesh, *Hippocrates* and

322 *V A D E M E C U M*: Or,
Aristotle understand muscles. Besides flesh,
'tis compos'd of a vein, artery, nerve, fibre,
membrane, ligament or tendon, and so
hot.

Its true original is blood in the first forming of parts, but by connexion in its ends, 'tis said to rise from a firm part, and be inserted into a moveable one, because design'd for motion, which is caus'd from something at quiet.

This original and insertion is known by conduct and series of fibres, whereby you may judge of its site, whether right, oblique, or transverse; for by these positions in a mans body, all the muscles of it inward and outward are dispos'd.

Their quantity and magnitude are various, according to the variety of places, and parts to be mov'd, which require greater or smaller muscles.

Their number great, my ever honored Master, Dr. *Riolan*, computes to be 431. but since our body is double, its muscles are so too; few single, as *sphincters* and *diaphragma*.

Their figure various, *square*, *triangular*, *round*, *long*, *four-sided*, *deltoid* like Δ , *three-sided*, yet are usually round, whether you regard its circumference in a plain muscle, or its bulk in a long and thick one: Therefore *Hippocrates l. de arte*, defines a muscle, flesh turn'd about into

into an orb; but their greatest part are longish: wherein observe their middle more swell'd, the ends narrower; the middle is call'd *venter*; the immoveable end *caput*, the moveable *tendo*, or *aponeurosis*, because 'tis inserted into the part to be mov'd; each end for the most part is nervous, but *tendo* is all nervous, in almost all the long muscles; *venter* is carnous, seldom nervous.

Their color red for the most part livid, and leaden in a few, sited in some sordid place.

Their connexion double; in both ends, and diverse parts; whereof one ought to move, the other not. Moreover, they move the parts to which they adhere in passing, though not design'd so to do.

They all communicate with parts by veins, arteries and nerves, which they receive above their *venter*, to infuse in them a motive power.

Their action is universal, agreeing to all of 'em, *i. motion*; particular, *i. the motion of some one part*. This is perform'd by its contraction, when whil'st retracted towards its head, 'tis shortned, and swells without; which agrees with all, except those of *abdomen*; which, acting and contracted, swell within, because they have no opposite bones to thrust against; therefore its true action is contraction, or conserving what is contracted

ed

ed; which motion is call'd *tonicus*, in one muscle remaining long in one figure, or in many acting and extending together, as when the whole hand is held long elevated and extended.

The motion of other muscles, as extension and relaxation, are only by accident. On these motions depend the motion of the parts, which are not only distinguish'd by difference of place, before, behind, upward, downward; but also by figure of the part, which is the site of the part in motion. Now their *site* is either larger, and that *streight*, call'd *extension*, or *oblique*, and that either *lateral*, as *abduction*, and *adduction* in the fingers, or with *inversion*, as *pronation*, and *supination*, in the hand and *radius*. Also by reason of their like or contrary motion, they are call'd fellow or brother muscles, which in opposite places conspire to the same action, as the muscles, which bend the cubit, are sited in the same part; the temporal muscles which move the jaw in divers parts: such as perform a contrary motion, are call'd *antagonista*, as the benders are opposite to the extenders.

The fellows are almost alway alike in *magnitude*, *number*, *strength*; the antagonists vary much according to the weight of the part to be mov'd, or vehemency of the action. The conduct of the *fibres*, shews the manner of
action

action in a muscle by its site ; for so you may easily distinguish a right one, from an oblique and transverse. Also the diverse conducts of the *fibres*, in the same muscle, as they are directly carried to divers risings and insertions, shew the diversity of actions in the same muscle, as in the *Trapezium* ; for by the extremities of the *fibres*, you know the *head* and *tendon* ; where the nerve is inserted, there's the head ; but the *tendon* is more nervous than the head, and directly opposite. If a muscle perform one action, or many, according to the variety of its rising, it obtains divers connexions, *i. heads* and *tendons*.

Now a *tendon* is the extreme part of a muscle, by which we bind and move the bones: begot in the first conformation, the first and chief part of a muscle, which takes its beginning from the muscles rise, and is spread about all its body ; if a *tendon* is nervous in the beginning, 'tis so in its end ; or if in the beginning it be divided into flesh by *fibres*, they are after united to form a *tendon*. Such have strong muscles, which execute strong action in flexion, extension, and tonic motion, as in the upper and lower joints, and back, for the erection of the spine or trunk of the body : other muscles, as they are fibrous in the beginning, so are they in the end.

Much fat is cast about a hard and rough *tendon*,

tendon, to moisten it, that it may move the easier ; therefore *fibres* disperst through the flesh, are nothing else than a *tendon* so divided, and torn asunder ; and *vice versa*, a *tendon* is nothing else than united *fibres* ; and therefore a *tendon* is either compact and solid, or divided into *fibres*.

Now *tendons* are solid or plain, or membranous, or round, short, or long ; if they be nervous in the beginning of a muscle, they will be such in the end : sometime they are seen nervous in the end although they have original from the fleshy head of muscles.

The hardness, thickness, lightness, and silver whiteness, with excellent clearness of a solid, long, or membranous *tendon*, is admirable ; whence it acquires so much comeliness, that *Fallopious*, a most excellent *Paduan* Physician, affirms there's nothing more beautiful than a *tendon*, and chrystalline humor ; wherefore since 'tis a similiary part, begot of seed, endow'd with a peculiar substance, such as is never found but in a muscle, it may deservedly be thought its chief part, on which depends its action ; the other parts co-operate with a *tendon*.

Of the *muscles* after, under which lies the *peritoneum* ; stretch'd over all the parts of the guts, whence so nam'd, *ab Arabibus siphac* ; 'tis the largest membrane in the body ; double
and

and unequal, observ'd to be thickest from the navel to the *pubes* in women, in men contrary. The external membrane is knit to the *vertebra lumbor.* the internal is disjoin'd to receive the reins, and redoubled to make the *mesentery*, cover the *diaphragm*, and liver; communicates with chief parts, and particularly with all parts contain'd, giving them membranes, *ergo* may be call'd their mother; as *meninges* of the brain, white as other membranes are.

Next the *Caul*, a thin, double, fat membrane, divided into four parts, *intestinal*, *hepatic*, *lienal*, *mesenterical*, because it covers them, and rises from the last; under this lie the

Guts, are a tubulate body, rising from the *pilorus*, and diversly circumvolv'd, end in *anus*; 'tis one body, but diversly nam'd, because of its divers conformation, use, life, &c. chiefly divided into thin and thick; the thick surround the thin in the middle; the thin divided into,

1. *Duodenum*, 12 fingers breadth in length, begins at the Stomach.

2. *Jejunum*, betwixt this and *duodenum*, is the choler passage, near which is the sweet bread passage observ'd by *Virsungus*; it begins where the guts begin to be wreath'd on the left side; lies wholly in the navel region a cubit and half long.

3. *Ilium*,

3. *Ilium*, from winding, slenderer, but longer than the rest; occupies *Ilium* and *Hypogastrium*; it is subject to *passio iliaca*, which is an inflammation, not a twisting of it; and falls down sometimes into the groin, and cods. The thick,

1. *Cæcum*, and its wormlike appendix.

2. *Colon*, the largest of all; it begins at the right rein near the appendix, and turned upward, lies under the liver and stomach, passeth to the left *Hypochond.* where 'tis wreath'd, in its obliquation and descent towards *Ilium*, it touches the left rein, and a little below, bowed like an *S*, ends in the top of *Os Sacrum*. To its beginning is fastned a valve opening downward, hindering any regress from the great guts to the small; 'tis knit to the membrane of the *peritoneum*.

3. *Rectum*, which from the top of *Os Sacrum*, *pergit ad anum*; they are seven times longer than the body, the thin are to carry the *chyle*, the thick to receive the excrements.

The *Mesentery* binds the guts in their places; seated in the middle belly, rises from the *vertebræ lumbor.* 'tis double, between is fat, and many *glandulæ*, and a fourfold kind of vessels, (*venæ lactææ* being the 4th) Seeing it communicates with the spleen, *per arterias celiac. & venam splenicam*; the guts by connections, liver, &c. and hath a fat glandulous sub-

Substance fit to retain impurities, it may well be call'd the Nurse of diseases; therefore with *Ferulius*, one ought to have a great care to purge it, &c.

The *Sweet-bread* is a spongy mean between flesh and glandul, reaches from *hepar* to *splen*, both whose filth it receives, call'd the last's Deputy, and lies under the Stomach.

Within the belly are contain'd two notable veins, one call'd *porta*, dispers'd to parts design'd for nourishment, going no further; the other, call'd *cava*, nourishes the whole body; cast without *peritoneums* cavity, join'd with *porta*, creeps along, *lumbos* and *dorsum*; and is thought produc'd from *cor*, not *ven.porta's* trunk; descending the belly, emits,

1. *Gastrepiploim*, distributed to the stomach and caul.
2. *Intestinalis*, to *duodenum*.
3. *Cystica gemella*, to the gal.
4. *Gastrica minor*, to the right side of the stomach.

These branches thus produc'd, the trunk is divided into two famous branches, *splenic* and *mesenterical*, this into four, of which the largest keeps the name.

2. *Hemorrhoidalis* slides to the right gut.
3. *Cecalis*, carried to the blind gut, or beginning of *colon*.
4. Goes to, and nourisheth the rest of *colon*, lost in the *pancreas*.

The

The *splenic*, where it is detected, produces four opposite veins above and below; *Gastrica major*, ascending to the left side of the stomach; *Epiploica dextra* opposite to this, dispers'd to the gaul; *coronaria stomachica* to the stomach; *epiploica sinistra* to the caul.

The *celiacal* artery accompanies the branches of *vena cava*, and is a branch of the great artery descending; and look into how many branches *vena porta* is divided, into so many is this; communicates with *vena porta*, by conjunction of their mouths. In *Hippocrates, lib. de morbis mulierum*, 'tis call'd the breathing place of the lower belly. *Duret. in Cœc. Hipp. p 383.*

Notable is the *splenic* artery, which goes not by the *pancreas*, but creeps according to the longitude of the *diaphragm*, by the spine; 'tis as big as the *splenic vein*, ambiguous in its progress, and gives no branches to neighbor parts: inserted into the spleen by a double forked branch, as the *splenic vein* is; so when the *celiacal* artery is taken away, look not for any other *splenic* artery, unless two or three small arteries, passing to the stomach.

The Stomach consists of 2 proper membranes, and 1. common from *peritoneum*, sited between the liver and the spleen, like a Bag-pipe; the ingress is call'd *Stomachus*, the egress *Pylorus*,

produced, equal in height, lest victuals should
below; through before digested; communicates
side of all parts of the body.

The liver, the organ of blood, is like con-
densed blood, sited in the right *hypocondrium*,
under the short ribs. In man 'tis not divi-
ed into lobes, or fingers, as in brutes, yet
there is a cleft, where the umbilical vein
steps into it, and sometimes two little ones
under it, or one which receives the *vena porta*
trunk; though it be continuous, Anatomists
divide it into two Regions.

1. Superior, exterior, call'd gibbous, into
which *vena cava* sprinkles its roots.

2. Inferior, interior, call'd *cavous*, into
which *vena porta* scatters hers.

The *gall-bladder*, is a two-coated mem-
brane, receives the choler flowing from the
liver, fix'd to its great lobe under it, it re-
sembles a large Pear; hath cystic and hepatic
pipes to carry choler; that carries thin choler
into this, which carries thick and all away.

Splen is plac'd against the liver, and its
ballard, and lieutenant in blood-making;
spongy, sprinkled over with many vessels like
thrills; knit into the stomach by remarkable
veins, call'd *vas breve*, by which it disburthens
it self into the stomach; by splenical veins and
arteries into the guts and reins; like a tongue
in brutes, the sole of a foot in men.

Here

Here of the *vena cava*, and *aorta*, within the belly.

The trunk of *cava* in respect of the liver which by a branch supplies it with blood, may be divided into the upper and lower trunk; the lower produces *vena adiposa*, dispers'd into the fatty membranes of the rein, then the emulgent, distributed to the rein; then the spermatic, whose right side rises from *cava's* trunk, the left from th' emulgent; lastly, it emits 3 or 4 branches, call'd *lumbares*, into the loins, even to *spinæ medulla*.

When the trunk comes to the top of *os sacrum*, 'tis parted into two pipes, which from their site are call'd *Iliaci canales*. From these on both sides are produc'd other veins, chiefly *Sacra*, *Hypogastrica*, *Epigastrica*, *pudenda*. In Women *Hypogastrica* is larger, and nourishes more parts, holds the menstrual blood, till fit for voiding; *Epigastrica* is twofold in women, 1. Ascends to *musculus rectus*, th' other opposite descends to the womb.

Seeing the veins are the vessels and conceptions of blood, they have a thin coat, except that this *cava's* trunk hath a thicker and stronger, to prevent breaking, if the blood should swell and boil in't, and might by the coats tenderness sweat and breathe out *Hippocrates* elegantly calls the veins *spiracula corporis*; because they being open'd, there issues
a fu-

saliginous spirit with the blood, and at the same time Air let in cools.

The descending trunk of *aorta* emits so many branches, as th' inferior trunk of *cava* produces; but transmits the remarkable splenic artery undivided, winding to the spleen. This is broad, of the thickness of a quill, furnishes it with arterial blood, that the thick blood might be attenuated, and made fit to nourish the stomach, and neighbor bowels; and afford a fermenting juice to the stomach for chylifying, by that mixtion of both bloods. Perhaps also in a great obstruction of a viciated liver, arterial blood may be brought to it by the *splenic vein*, and be as it were a natural tartar vitriolate, to deobstruct

Then it produces *celiaca*, which is divided into as many branches as *porta*, and hath communion with it by a mutual anastomosis, i. e. conjunction of the mouths of your vessels.

Th' *aorta* trunk is made of a tunic 6 times thicker than a vein, so not subject to an *aneurysm*; as the lesser arteries are, from their coat dilated, broken, or open'd, as in an artery cut for a vein, in the arm.

Between the reins at the base of *mesenterium*, look for *Fallopian's* texture of nerves, above of the *stomachic* and *costal* meeting on both sides; from which are deriv'd all nerves distri-

Renes, instruments of drawing and separating *serum*, have a fleshy substance, the like in no part; sited in the loins, within the *peritoneums* folding; and seem to be plac'd without this cavity; said to begin at the last *bastard* rib, they are two that one might supply the office. From the hollow side spring the *ureter* and *emulgent veins* and *arteries* proceeding from *cava* and *aorta*. Within are *Piss-bladders* form'd of *ureter* dilated, into which drops of *serum* through 9 *caruncula papilares*, where 'tis separated from the blood, which nourishes them, or reflows to the *emulgent veins*; these are sharpned without into 9 pipes, made of the *ureter* dilated.

Ureter is a Pipe to convey the urine to the bladder, which is its original, rather than the reins, because membranous; within the reins parted in nine, fitted to the *papilar caruncles*, to distill the *serum* into the *ureter* bladder within them.

The *Piss-bladder*, is of a membranous substance, consisting of two coats, the third which is attributed to it, is a doubling of the *peritoneum*, in which it hangs, like a bottle invers'd, and with this partition is severed from the guts, and other parts only in man lest it should be displac'd with the weight of the guts; it's shap'd as a bottle invers'd, whose bottom is in the lower *Hypogastrium*, the

The neck hid beneath under *ossa pubis*. The
 ureter passes out of the greatest hole, the other
 two are the ends of the *ureters: muscul.*
bulbifer, form'd of it, contracted shuts its
 orifice. There is another *externus spleniatu*,
 two fingers broad, placed about its neck, and
 prostate *glandules*, upon this depends the
 power of its shutting and opening, it bath
 veins and arteries from the *hypogastrics*, nerves
 from its neck from *os sacrum*, in its body from a
 nerve of the sixth pair.

Of the *genitals* in Man, the yard, with the
 bladder, is first to be explain'd. It hath no
 bare skin; cover'd with loose skin, which
 doubled makes the *preputium*, which covers
 the *glans*, to which 'tis ty'd with the bridle:
 then a membrane which ingirts its ligaments,
 then the vessels, 2 *erector muscles*, 2 *ejacula-*
tors, then 2 ligaments with *urethra*, of spun-
 ny substance, not continued to the bladder-
 neck, but annex.

Next *inguina notanda*, in which the crural
 vein and arterie, with nerves descending to
 the thigh, whereon rests the production of
 the *peritoneum*, drawn through holes of the
 oblique tendons and transverse muscles, over
 this the *cremaster* carried athwart through
 the groin to the cod, descends to the testicle,
 &c. above the bending are kernels lying
 close the *peritoneum's* process, below, near the
 vessels

vessels are other, bordering upon vessels within the process are contain'd *vas spermatic.* carrying seminal matter *ad testem*, and another returning from above, carrying it from it to the seed bladder; within the process descends *ilium*, *peritoneum's* inward coat being relaxt, if broken to the cord.

Scrotum is the stones case; they are oval glandulous, for making seed; made of three proper membranes, for each hath two common *cutis* and *dartos*; the first proper is *erythroides*, from *cremaster* expanded; the second the production of *peritoneum*, infolds them; the third call'd *nervea*, immediately infolds them; on them orethwart lies *epididymis*, like a silk-worm, to one end whereof cleaves *vas spermatic. deferens*, and *parastata cirsoide*, entering *testis* substance, and emptying the seed matter; from the other rises *vas ejaculatorium*.

Womens *genitals* are external, internal, these prepare seed, or its matter, to speak with *Aristotle*, and afford place to conception, those are visible, and must be contemplated before dissected; therefore let us stay awhile in the Porch, before we enter into the Sacred Cell; where is, 1. *pubes*: 2. the passage shut with valves, (whence *vulva*) call'd *cunnius*; the valves are term'd *labra cunni*; which drawn aside the *nymphs* appear, solid membranous excrescences, broader a top; where occurs a fleshy

esthy tubercle, call'd *clitoris*; the *nymphs* distracted we see *caruncula myrtiformes*, whereof are lateral, 3d below towards *anus*; the 4th plac'd alwayes at the end of *urethra*. These appear in those alive; thrust your finger into Womans sheath, you'll feel it rough, like an Oxes coat; if you go higher, you'll find the inward orifice of the womb; all that space is call'd *collum uteri*.

In Virgins, after the *nymphs*, occur a membrane call'd *Hymen*, drawn over the orifice, pierc'd with a little hole; if this be found, *caruncula myrtiformes* are not. If it be wanting, the *caruncles* are so tumid, they fill the orifice, that they scarce admit a little finger without pain.

To shew the inward parts, the parts of the *podex* must be cut up too, then the *symphyfis* of *ossa pubis* detected, the gristle plac'd between them, must be divided with a sharp knife.

These parts may be divided into those which compose the womb, and preparers of seminal matter; these differ from Mens onely, that they are not so straightly or windingly united, as to make *parastata circoide*. One part of these is carried *ad testes*, the other *ad fundum uteri*, a 3d creeps *ad principium vaginæ*. *Testes* are within, unlike mens, want *Epididymis*; but one coat, soft, made of

Q

little

338 *V A D E M E C U M*: Or,
little bladders, wherein is a ferous humor, will
spurt in the face of the dissector, if he beware
not.

These observ'd, view the womb with its
external parts; in its upper part rise the horns
and four ligaments, two broad from the
peritoneum; in Virgins like Batts wings,
they hold the womb from falling: two
round and longish, hollow, from near the
horns; when they come to *clytoris*, they spread
like a Goose-foot.

The body of the womb is fleshy, spongy, as
thick as a mans finger; cloath'd with 2 mem-
branes, 'tis sited *in imo hypogastrio*, in the mid-
dle between *intestinum rectum*, and *vesica*;
'tis like a small cupping-glass, sometimes di-
vided into two cavities, whence some bring
two or three children at a birth. The cavity
in Virgins so very small, as to contain about a
little bean, in mothers larger.

The *Chest*, the mansion of the vitals, bound-
ed below by *costæ nothæ*, and *diaphragm*. above
by *clavicula*, its whole amplitude is form'd of
all the ribs, *vertebræ spinæ*, and *sternon*. The
neck comprehending the beginning of some
parts which belong to this, is refer'd to it,
rather than the head, though its pillar. Its
common containing parts are the same with
the belly; only the fat and fleshy membrane,
receive the paps in both sexes; in Women
for

for ornament, and to nourish the child, they are made of heaps of cluster'd kernels, confus'dly dispos'd upon their peculiar membrane; the biggest is in the middle, under the breast, made of contracted skin, and boar'd with a little hole, rough outwardly for the child's hold. Its proper containing parts are bony, musculous, of which in their places, or membranous.

As, 1. *Pleura*, includes all the internal parts giving them membranes like the *peritoneum*, is firmly join'd to the bony parts and midrif; double, which in swellings separates; reflex'd on both sides the back, and rising to *sternum*, 'tis redoubled, and frames,

2. *Mediastinum*, which separates the lungs and breast into two parts, and is fastned to the *claves* and midrif, and by help of the *pericardium*, holds the heart suspended, and binds the midrif.

3. *Pericardium*, the hearts case, containing water to moisten it.

Next *Diaphragma*, parts *thorax*, from *abdomen*, ty'd to all the bastard ribs; ['tis the chief instrument of free breathing where 'tis, for Birds breathe without it,] and two true ones, and to the sword-like gristle, and so sends two fleshy *apophyses* to the loins utmost *vertebra*; its compass made of musculous flesh, its centre a sinewy membrane, to bear the beating

of the hearts *cone*, and bear up the liver, fastened to it, and drawn up within the chest, by the intervening *mediastinum*. 'Tis Cavaous towards *abdomen*, gibbous within *thorax*; it has *vena & arteria phrenica*, from *cava* and *aorta*.

2. Famous nerves rising between the 4th and 5th *vertebre colli*, inserted into its centre; it hath perpetual motion by right of the heart, if not equal. *Hippocrates* calls it the bellies fan.

The *lights* are instruments of breath and voice; conflatd therefore, of a soft, spongy substance, white without, reddish within; interwoven with *bronchia*, and pipes of *vena arterios.* and *arteria venos.* so as *bronchia* are plac'd between the veins and arteries; sited within *thorax*, and with the heart, fill its cavities, while dilated to fetch breath; but leave it empty while contracted, to expel the footy or superfluous spirit; these motions are perpetual all our life-time; are divided into two parts, and each into sundry *lobes*, that one hurt the other may remain sound: out of its place you'll see each part is like an Oxes hoof, cloven and gibbous outward, cavaous where it touches the back; girt with a thin, porous membrane to disburthen it self, in suffocations into the *thorax*, and resuck filth there stagrating. 'Tis nourish'd after another

her way than other parts, for it borrows blood from the heart, whence it hath its vessels, and not from *cava*; so those Physicians are deceiv'd who in its diseases say 'tis oppressed by a flux of blood, which innumerable veins shed into it; it can't receive humors from the head unless with cough, which ceasing, it suffers only from the heart blood.

The heart, the chief and most noble viscus, the microcosmical monarch; *fons vegetans vivifici; primum vivens, ultimum moriens*: a fleshy strong substance, interwoven with all sorts of fibres; and lest it should become dry, being the seat of heat, 'tis moistned about with fat and *serum*, sited in the middle of *pericardium*; 'tis like a Pine Apple; the broad end call'd the *basis*, receiving four vessels, *vena cav. ven. arterios. aort. arter. venos.* in this are hollow cases plac'd by the vessels, that carry blood to the heart, call'd *auriculæ cordis*. In aged the right is larger, in infants *è contra*. The other end's call'd *conus*; the veins and arteries upon the *superficies*, seems for repairing the fat.

Before we proceed to the inner structure of the heart, we are to consider how 'tis moved; for its action is motion, or pulsation; for the blood it receives, it expels by beating: therefore there are two parts of the hearts motion, *systole* and *diastole*, i. contraction

traction and *dilatation*, when it receives 'tis dilated, when it expels 'tis contracted; between each motion there is a pause, call'd *perisystole*: How these motions are made 'tis doubtful; rejecting other opinions, *Kiolan* layes down his: 'Tis probable the heart being widened, cannot receive, unless the dilatation be made, by the base being pull'd back towards the *cone*; that the vessels may pour out blood, and the heart draw it to it. In *systole* the heart is contracted, and the blood received is thrust out; then the heart becomes narrower, and longer; and because 'tis shut up in *pericardio*, which cleaves roundly to the sinewy centre of *diaphragma*, it smites it with its *cone*; and with its *basis* and *aorta* hanging out, it smites the breast, at the same instant that it is extended and lengthned.

This perpetual motion of the heart, though it depend upon an inbred faculty as to its production, yet it cannot persevere; save by the pulse of blood, with which it frames the vital: But if in every pulse it admit one drop or two, which it casts into *aorta*, and in an hours space it beat 2000 times, 'tis necessary a great part, or all the blood pass by the heart within 12 or 15 hours. But this quantity may amount to 15 or 20 l. of blood, which is all contain'd in the vessels, *ergo*, all the blood must needs be revolv'd by the heart twice or thrice

thrice within 24 hours, as the hearts motion is quicker or slower.

But that this Circulation might be performed with greater commodity and facility, our immortal Dr. *Harvy*, Author of this motion, will have the blood to be carried through the lungs, from the right to the left ventricle of the heart, repudiating the tradition through the *septum cordis*, and that the whole within an hour or two is revolv'd by the heart and whole body; but this way *Riolan* allow'd not of.

Having explained the Circulation, the heart must be open'd; you'll find it divided into two ventricles by *septum medium*; the right wider, softer, the left harder, narrower, defended with a thicker wall, and reacheth to *conus*; the right receives *cava*, and *arteriosf. cav.* pours blood into *cor*; *arteriosf.* recarries all or part to *pulmo*; to the orifices of *cava* are join'd three pointed *valves* to hinder the bloods regrefs; *Arterios's* orifice is compass'd with three *valves*, like *figma's* to resist its reflux.

The left ventricle receives *aorta*, and *arteria venosf.* this, say some, carries blood from *pulmo*, to the hearts left ventricle, or air prepar'd in *pulmo* to the same, recarrying fuliginous vapors, which many allow not. *Arteria venosf.* hath in its orifice but two tricuspid

valves. *Aorta* recarries arterial blood out of the left ventricle; its orifice is obstructed with three *figmoid valves*, which hinder blood from returning.

Now of the vessels, *viz. veins, arteries, nerves*, contain'd within the chest; there are a few words to be writ of the other part of the *vena cava's* trunk, for the whole has been abundantly explain'd in the lower belly: you shall then observe the trunk piercing the midriff, receives the hepatic branch that rises from the top of the liver, carries blood into *cava*, and from this oblique insertion to the opening of the trunk in the hearts right ventricle, there is a distance of two fingers breadth: this same opening and cleaving *cava* to the hearts right ventricle, is contain'd and seen within the *pericardium*, which when the trunk hath pass'd, ascends the *claves*; then seek *vena azigos*, nourishing the ribs; then the *intercostal*, on each side one rises from *cava's* trunk ascending; if *azygos* branches, reach not to the upper ribs.

When the trunk comes to *claves*, it produces the double *mammaria*, internal and external, both carried to the dugs along *sternon*; but the inward, and greater, transmitting a *scion*, by a hole of *sternos*, to the dugs, runs to the right muscle, to join to *Epigastrica*.

In separating *cava*, you shall observe a
great

great glandule underneath, in the throat placed under the *claves* like a cushion, to sustain their branches, call'd *thymus*, soft in young ones, and *calves*, and is deliciously eaten with *pancreas*.

From the *subclavian* branch, proceed four remarkable ones.

1. *Anterior cervicalis*, spread over the *mastoid* muscles, ascends to the chin, bedewing the necks foreparts.

2. *Jugular.intern.* ampler than the extern, which ascends the neck under the *mastoid* muscle, and about its middle is cut into three branches, the thicker and greater going to the *vertebræ*, enters the brain, by a hole near the *styloid apophyse*, and join'd to the side-pipes of the *meninges*, pour out its blood, and goes no farther.

The 2d branch creeps along the necks sides, and is distributed under the jaw.

3d Goes to the tongue, and puts forth the granulars, which open'd in diseases of the head, wonderfully help. A fingers breadth distant from this, is *jugularis externa*, and obliquely creeping under the *clavicle*, below it emits two *scions*, whereof one goes strait to *muscul. deltois* under *acromium*, and unites to *ven. cephalic.* the other rises to the heads lateral parts, where parted in two. it goes to *maxilla's* corners, part distributed upon the

jaws, and all parts subject thereto: t'other portion transfer'd behind the ears, is dispersed upon *frons* and *occiput*, upon the temples by a plentiful issue.

Now because the arteries and veins are alwayes contiguous, with the same candor you shall search out the trunk of *aorta* ascending; skipping out of the hearts left ventricle, immediately in its rising produces two coronary arteries, girding the heart like a crown; you cannot see these exact'y, unless you look into the open'd *aorta* by the hearts left ventricle; if but one, you'll find a little *valve* at its orifice, as in *vena coronaria*.

Aorta's trunk marching a little further, is parted without the *pericardium*, into two branches; one call'd *ascendens*, the other *descendens*. The first is split in three, producing three arteries from the same place; the right ascending to *claves*, makes *subclavia dextra*.

The other two rise on the left side, whereof the first is call'd *carotis sinistra*, bending upward; the second call'd *subclavia sinistra*, then *axillaris*, coming to the arm-pits, and nigh *acromium*, emits *cervicalis*.

The right subclavian artery surmounting *claves*, produces *carotis dextra*, which nigh the corner of the lower jaw, is divided into two notable branches, intern and extern, they're call'd

call'd *carotides*, because if press'd, a *caros* seizes upon a man, and he loses his voice.

To find out the ascent of these, and their penetrating the brain by holes of the scull; put into the various divisions of this artery, a flexible small wire knob'd at the end; which may be done and seen by the vulgar administration, beginning at the upper part, not lower, as *Varolius* does, and in the neck put a probe into the *carotide*.

Aorta's trunk twisted on the left part, and bent downward, is prop'd by the *vertebræ*, and in its progress to the *os sacrum*, on each side, produces so many little arteries as there are *vertebræ*; and there's no *azygos*, or lone artery found, to accompany the *azygos* or lone vein, but such little arteries supply its place within the breast, they may be call'd *intercostal*, in the belly *lumbar arteries*; they insinuate themselves in *spinæ medullam*, by holes in *vertebris*; which may be prov'd from *Hippocrates in coac. Gal. l. 4. de loc. aff.* and from my ever honored Master, *Dr. Riolan*.

Eight famous nerves are to be observ'd in the breast, 2, *diaphragmatic*, rising from between 4, and 5 *vertebræ cervicis*; from that thicker cervic nerve passing to the arm, within the doublings of *mediastinum*, they descend the nervous centre of the *diaphragm*, 2 recurrent, and 2 stomachic, branches of a nerve of the

the 6th conjugation, whose trunk you shall search for in the neck, nigh the inward jugular, by the *maistiod apophysis*, where 'tis cleft into two branches one whereof is spread into the upper muscles of the neck; the other plac'd between the intern jugular, and *carotis* descends to *claves*, where its cut into two branches recurrent and stomachic. The reflexion of the left recurrent is found about the bending of *aorta* descending; and easily before the *pericardium* be open'd, you'll find the reflexion of the right, about the right subclavian artery. *Riolan* saw and demonstrated Dogs to live, and run these being cut away, but without voice; and as bound, they take it away, so loos'd 'tis restor'd; therefore they serve for voice, because they run upward, that they may be inserted in the heads of the *musculi laryngis, linguae, os hyois*, which rise from the lower parts. Search for the stomachic nerves below the heart about the *vertebrae*, hid within the folding of *mediastinum*, from these you'll see 10, or 12 branches drawn into the lungs: and from little branches of each stomachic wound together, is made that admirable texture of nerves in the upper orifice of the stomach: After creeping along the back-parts of the stomach, they are join'd to the *costal* nigh the *spine* between the reins, making the texture of nerves, from which

which all nerves, distributed in the parts of the lower belly are drawn.

All Anatomists derive the *costal* nerve from the 6th pair, when as it rises from the same point of the brain with the 6th pair. This going out of the scull is strengthen'd by a *ganglion* about it, and undivided descends upon the neck; when it comes to the three last *vertebræ*, 'tis environ'd with another *ganglion*, and made thicker, by an addition of three little nerves; and falling within the breast, in its progress about the *spine* under *pleura*, 'tis augmented by accession of other little nerves coming from the dorsal marrow, piercing *diaphragma*, 'tis join'd to the stomachics, to make the netlike texture of nerves between the reins.

The *head* of a spherical figure, mean bigness, is divided into the hairy and smooth part, while undivided; the first call'd the face, whereto belongs the forehead; the hairy reteins the name of head. Again, the head is divided into 2 direct parts, and lateral, the first are call'd *synciput*, which ascends forwards from the beginning of the hair 4 or 5 fingers breadth to *vertex*, then 2 fingers space, and as much after the vertic point, 'tis call'd *vertex*, the hinder is call'd *occiput*, the lateral *tempora*, because they shew the time of a Mans age, by their hollownes, baldness, hoari-

hoariness; 'tis made of many parts, containing, and contained; the containing are membranous, bony; contained are *cerebrum*, *cerebellum*, 4 roots of spinal marrow, and their particles included in their cavities.

The first occurs is *cutis pilosa*, which has its *cuticula*; under these lies *membran. carnos.* the seminary of hairs; which if fleshy, makes the skin moveable, because 'tis fixt to't without any fat between. The *pericranium* follows, immediately compassing the scull; produc'd from *crassi meninx*, in children passing by the middle sutures, at which time they are not firmly intertext saw-like. Besides this, there is scrap't from the scull a *periostion*, as in other bones; therefore 'tis not the sculls *periostion*, but by a great providence of nature, is spread over the scull, to hold fast the muscles rising from it; such are the temporal, the strongest in all the body, with which its fellow binds and lifts up the jaw, and bears greater burdens in some, than others acting together: farther it strengthens, and strictly comprehends the muscles of the hinder part of the head; descending to the eyes, and stretch'd under the eye-lids, it makes the conjunctive *tunic*. These being separated, the scull appears, of which in the doctrine of bones.

The scull saw'd asunder, *f. a.* and the covering

vering detracted, the brain appears, proportion'd to the scull conteining it ; for if the brain gives figure to the bones when soft, the scull follows its bulk great or little. If it keep not the natural figure and bigness of the head, its conformation is naught, and so sick and hurtful to the inward senses principal and subservient in their actions. 'Tis of a soft, waxy, white substance, which because, like a kernel, it sucks up humidities, 'tis call'd the great *Glandule* by divine *Hippocrates* ; 'tis divided into two parts ; that which is 3 times greater, reteins the name *brain* ; the lesser in the hinder part, the *little brain* ; both envelop'd with common coverings, call'd *meninges* ; the first is *crassa* ; the 2d *tenuis meninx*, call'd *matres* by the *Arabs*, because from these they believ'd the other membranes of the body were propagated. The first knit to the sutures, suspends the brain's whole bulk ; these connexions are seen, when the Sculls covering is taken away ; in this are observ'd innumerable vessels, wherewith 'tis besprinkled ; they are rather arterial, produced from *rete mirabile* ; stretch'd from below upward to the *meninx's* pipes, where they carry their blood ; therefore 'tis this tunic beats, rather than the brains substance.

Now its pipes are 4, 2 lateral, which run along the sides of the *lambdoid suture*, to receive

ceive the blood from the internal *jugulars* and *cervicals*; or by them according to the doctrine of circulation, that blood may re-flow to the heart. From the union of these 2 pipes, is form'd a third longitudinal, drawn directly as far as the nostrils. From meeting of the 3 below, a 4th rises, entering the brains substance between *cerebrum* and *cerebel*. not shut up in the folding of *dura mater*, but 'tis a great vein, so call'd by *Galen*, which descending into the former ventricles, makes *plexus choroides*, dispers'd through all the ventricles to the brains *basis*. The longitudinal pipe deserves rather the name *torcular*, than the 4th, because from thence, by innumerable little veins on every part through windings of the brain, the blood is distributed to the lower parts.

Now this *crassa meninx* divides the brain in 2 parts to the middle, nigh *corpus callosum*; this diversity is call'd *falx*, and doubled on both sides, severs the brain from *cerebellum*.

The thin *meninx* follows, immediately inclosing the brain, insinuated into its windings; for its substance is without, in a wonderful manner, full of deep windings; for the levity and traduction of little arteries, which disperse the blood here and there; therefore *Pelops Galen's* Master, thought the beginning of the veins was there. A

A small part of the *corpus callosum* being cut away, the 2 fore and upper ventricles appear; which in the lower part toward the brains *basis* are larger, and thence rise upward.

A thin partition, form'd of the thin *meninx* doubled, call'd *septum lucidum*, quia *transparens* divides these.

Above the fore ventricles is a tripartite body, call'd *corpus psaloides*, sustain'd by three pillars, whereof two are lateral, revolv'd about those eminences, which *Galen* calls chambers of the optic nerves. The fore one is plac'd between the 2 ventricles.

From the concourse of the ventricles between 2 great hillocks aforesaid, is form'd a pipe, which makes the 3d ventricle.

In the sides of this the circumjacent eminences form, some *nates*, some *testes*; and from that pipe the hole going into the 4th ventricle, is call'd *anus*.

In the upper part of this pipe lies *glandule conarium*, and over this pipe, and 4th ventricle, is stretch'd a thin membrane, begotten of *meninx*, over which runs *plexus choroides*, diffus'd through the fore ventricles.

In the entrance of the 4th ventricle, is plac'd a solid portion of the brain, representing a River Crabs tail unshell'd, call'd *vermiformis processus*, it opens and shuts the passage
to

to the 4th ventricle. This is plac'd in the *cerebel*, which contains 2 other hinder portions of the spinal marrow; as the brain, the 2 other foremost, which with *Galen* may be call'd the beds of the optic nerves.

The *cerebel* pull'd away, you will see how it contains the 4th ventricle in its bosom, between the 2 hinder roots of the spinal marrow, and gives origin to 7 or 8 pair of nerves, except the optic.

If you gently pull upward the forepart of the brain to its *basis*, you shall observe the optic nerves, and the nerves for motion, and then *choana*, i. the funnel distilling *serum* upon *glandula pituitaria*, and 4 pipes distilling *serum* to the palate and jaws; then you shall consider the order of the other nerves, which are design'd in these two Verses:

*Optica prima, oculos movet altera, tertia gustat,
Quartaque quinta audit, sexta est vaga, septima
(lingue.*

Then under *dura meninx* in the brains *basis*, about the circuit of *sella sphenoidis*, is *rete mirabile* of arteries interwoven, form'd of the double *carotidæ*.

The eyes, organically made of many parts, internal and external; these are the eye-lids, their membrane makes the conjunctive tunic, which

which fixt to the brim of the socket, binds the eye in its hole. Their extremities are bound with a welt, call'd *tarfus*, whereto are fastned the hairs born with us, and keep the same length they had at our birth; call'd *palia*; their angular meetings, *corners*; by the greater are 2 little holes, call'd *puncta lachrymalia*; and to receive tears, &c. *glandula lachrymalis*, thrust into the little bones hole.

These being observ'd, the eye-lids are to be cut away, and the orbicular adhesion of the conjunctive to the eye, that the eye may come to sight; which is compacted and conglobated of fat about it to fill up inequalities, and for the eyes mobility, 6 muscles for motion, tunics, humors, veins, arteries, and nerves.

Before the fat be remov'd, view 2 glands: 1. *glandul. lachrymal.* sited within the little bone underneath; then the other unlike this sited in the other corner; the fat taken away, 6 muscles occur, of which after, then pluck out the eye; whereof 2 true orbicular tunics; the other are imperfect, and before you dissect the *cornea*, take away the *aponeuroses* of the muscles of the eye.

Then you'll see *uvea*, and its windowy hole, which makes *pupilla*, whose outward circuit is call'd *Iris*; its circumference is adorn'd with little ciliar fibres, stretch'd on the chrystal-

chryſtalline humor, to keep it in its place. Pour out the humors, and you'll find the chryſtalline drown'd in the glaſſy, then the inner *ſuperficies* of *uveæ tunic.* appears.

In the eye are contain'd 3 humors, aqueous, chryſtal, glaſſy.

The veins and arteries accompanying the optic and motory nerve to the eye, are eaſier noted within the brain.

The *ear*, instrument of hearing, is divided into external, call'd *auricula*, the cartilaginous part.

The inner ear ſhut up in *os petroſ.* is wholly bony, divided into 3 cavities, the firſt is *concha*, bounded with *tympanum*, plac'd at the extremity of the firſt paſſage; it hath a cord drawn tranſverſly, as in a military drum, then obſerve 3 little bones, *malleolus*, *incus*, *ſtapes*.

The *mouths* extremities are call'd lips, below theſe the chin, the ſides are the cheeks. The inner parts ſhall be deſcrib'd in order.

The *noſe* is divided into 2 cavities, call'd *nares*, parted by a hedge, reaching *os ethmoides*, on theſe depend five griftles, two lateral, call'd *ala*, the middle *ſeptum*.

The *neck* is divided into containing and contain'd parts, firſt common and proper, of which before and hereafter: yet obſerve kernels plac'd upon *cartilago thyrois*; then little *glandules* plac'd along the progreſs of *jugular*

gular intern. into which the brain disbur-
thens it self; under the lower jaw in the up-
per and forepart of the neck, are 2 other
glandules, which often swell, and in them is
bred *struma*.

Tonsillæ at the tongues root, call'd *Antia-*
les Paristhmia; *Ulpian* calls their pain and
swelling *Antiagri*.

The *gums* are flesh fastned about the teeth,
which cover the holes within and with-
out.

The *palate* is the mouths vault, a very
thin bone cloath'd with nervous rough skin,
because it wants a *periostium*.

At the end of the *palate*, depends *uvula*, a
fleshy particle; it hinders the reflux of liquids
to the nostrils, and purifies their going to the
larynx; whence those that have none are
hoarse, part of their drink flows back to the
nostrils, and from impure air a consumption
follows.

Isthmus is a space between *larynx* and *pha-*
rynix, seated in the jaws, like *areta terra* be-
tween 2 seas, call'd *isthmus*.

The *tongue* is a carnous fungous substance,
divided into 2 parts; so parted, though strict-
ly connex'd, that one side may have the pal-
le, the other free; one discolour'd, the other
rot. Propt by the *basis* of *os hyois*, and ty'd
with a strong band, sited very opportunely in
the

the mouth and jaws, that discover diseases hid in the belly, breast and head; for it is tainted and tinctur'd with their moist, fuliginous excrements, and is of the color of the predominant humor, so it ought to communicate with those parts; and as urine is inspected in all diseases, so is the tougue, *Hipp. l. 6. Epid. sect. 3. text 14.* for it signifies Lotion, which *Galen* hath confirm'd, *Comment. ad hunc locum.* Its painted end, which finites the teeth, is call'd *proglossis*; its broad part hid in the throat, *basis*; that it may not wander, 'tis retain'd by a band underneath, call'd *frænum*, hath veins from the jugular, arteries from *carotis*; under the tougue they are call'd *hypoglottides*, or *venæ ranulæ*, and the 2 glands there *ranulares*; nerves for taste and motion, and muscles, of which hereafter.

Larynx is the head of the wind pipe, and the pipe of breathing air in and out, seated in the forepart of the neck, call'd *guttur*; 'tis made of 5 gristles, the 2 greatest make its body: 1. *thyroides*. 2. *cricoides*; these 2 are ampler and harder. 3. *arytænoides*, plac'd upon *cricoides*, and shuts *larynx*; within is 4. *glottis*, that nothing solid or liquid may fall into it, it hath a cover, call'd *epiglottis*, alwayes elevated for breathing; nor is it depress'd, but by weight of liquid and solid aliment sliding down.

Aspera arteria, or wind-pipe, is sited in the
 pre-neck, to draw air to the lungs, and car-
 ries out sooty vapors; 'tis made of many se-
 micircular gristles, join'd from one another;
 imperfect behind, nor fill they the circle,
 because of the gullet lying beneath.

Oesophagus, or gullet, is the way of meat to
 the stomach, its beginning is call'd pha-
 rynx.

Of the Muscles in general before, now in par-
 ticular, and first of those of the Belly.

All over it are extended musculous fleshes,
 which join'd, make its carnous covering, con-
 taining and proper. They are divided into 12
 muscles, on each side 6; nam'd partly from
 their site, and rise partly from their figure
 and office, as *obliquus descendens*, &c. of these
 10 are ordain'd to force the inner parts, and
 some to move *os sacrum*, and *iliums* conjuncti-
 on, the 2 *cremesters* hold up the stones,
 which are fitly explicated here: *obliquus*, by
 reason of site and action, and *fibres* is divi-
 ded into *ascendens*, and *descendens*, *ascend.* and
transverse, carry a plain and dilated figure
 like a membrane; their amplitude answers
 the latitude of half their belly; yet *obliquus*
descendens is ampler than *ascendens*, and this
 than the *transverse*: the right is as long as the
 space

space from the *xyphoid gristle* to *os pubis*, though they rise from diverse parts, yet the membranous *aponeuroses* of the fellow-muscles, are so firmly join'd at *linea alba*, that they seem but 1 muscle.

Now *linea alba* is a parting of the bellies muscles, making a line reaching from the *xyphoid gristle*, by the navel, to *os pubis*. This is more evident, each oblique descending's *aponeurosis* being remov'd, because between the 2 right ones is discern'd a lineal space, fill'd with white fat, taken for *linea alba*: though the bellies muscles are knit to diverse parts, whence they are said to rise, yet they are all inserted *ad lineam albam abdominis, & os pubis*; each receives peculiar veins, arteries and nerves. Their action is *common* or *particular*; *common*, when they all act equally to press *abdomen* on every side, neither can they act apart in that motion; *particular*, when fellows, *viz.* ascendent or descendent act apart; those depress *thorax*, these move *os pubis, ilium, sacrum's* joints, without any or very little pressing *abdomen*, because it then ceases; but the bony juncture is quiet, and unmov'd, while *abdomen's* muscles equally compress and bind the inner parts. The use of *abdomen's* muscles, is while they are quiet to cover the inner parts, and defend them from outer injuries, to cherish and con-

serve

erve the inner heat. Now of *abdomen's* muscles in *particular*, and then of those that move *os pubis*, and *sacrum's* juncture.

Obliquus descendens, from 7 or 8 lower ribs, folded incarnous intersections or fibres, like the teeth of 2 combs, with *serratus major's*, fleshy fibres, and sticking to *os ilium's* ribs, and *os pubis*, by a broad *aponeurosis*, ends in *linea alba*, and, with its fellow makes one individual tendon.

Obliquus ascendens, from *os pubis*, and *iliac's* rib, and knit to all the false and true ribs *sim*, as far as the *xiphoid gristle*, ends in *lin. alb.* by a broad tendon.

Rectus is fleshy, from *sternon*, near the *xiphoid gristle*, and extended along the belly, is inserted in *os pubis*, nervous. At *rectus's* end lie 2 *pyramidals*, sometimes wanting, chiefly the right, but by supply'd flesh.

Transversus, from transverse *apophyses* of the loins *vertebræ* fixt to *os ilium*, and false ribs, and passing under *rectus*, by a broad tendon ends in *lin. alb.* strictly united with its fellow; near *pubis*, according to the groin's transverse length is *cremaster*, the stones proper muscle to hold up the testicle, 'tis the extreme part of *obliquus ascendens*, fixt to the fore, low spine of *os ilium*; 'tis distinguished by its redder and thinner flesh, and fingers breadths distance; it involves *peritoneum's*

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pro-

production to the testicle, and makes *erythrois*, draws back, and suspends the testicle. The stones common muscle is *dartos*, a continuation of the fleshy membrane, it suspends both stones. *Os ilium's* joint with *os sacrum*, is mov'd forward & backward in venereal congress; *recti & obliqui descendentes*. move this juncture forward, *thorax* being quiet, and thighs unmov'd, unless they follow *os ilium's* motion; *sacer* and *semispinatus*, from the back upper part, move it backward.

The eye-brows muscles 1. *Erectors*, from the foreheads upper part, and spread on its bone ends at the brows, sever'd above the nose. 2. *Corrugator*, which is no other than each eye-lids orbicular muscle.

The eye-lids moved by 4. *rectus*, belonging to the upper lid, rising at the eyes inner cavity, and spread over the muscle that lifts it, reaches to the lid. 2. *orbicularis ciliaris*, encompassing each lid; one drawn under the lids from *orbit's* circuit. 3^d. of a fingers breadth compasses the sockets surface, plac'd under each lid, and touching the brow, strictly binding both lids, elevates the upper, and depresses the brow.

The eye hath 2. obliques *trocleator*, from orbits cavity produces a thin tendon, which, drawn through a *transverse gristle* fixt to the bone, by and beneath *glandula lachrymalis*, is spread

spread over the eye. *obliquus min.* drawn externally by the great corner rowl'd athwart the eyes globe, comes to the great oblique's tendon; that the *aponeuroses* of both oblique muscles might meet to pull back, and fix the eye toward the nose; that of both eyes, act of seeing might be made one *pyramidal* line to the visible object. 4. *streight*. 1. *Elevator*.

Depressor. 3. *Adductor*, or *Lectorius*, sited at the great corner. 4. *Abductor*, *indignatorius*, at the less corner; these from *orbit's* cavity, and broad *aponeurosis*, are inserted in *cornea* under *conjunctiva*.

The ears muscles, are rather marks of muscles, than true ones, as in brutes.

The Noses common muscle is an upper part of *orbicular* compassing the lips, it depresses it when the upper lip's drawn down; one *elevator* on each side from the space between the brows stretcht to the nostrils bone, carry'd to their battlement, when these act, the nose is wrinkled; within the nostrils, under the succingent coat, lurks *constrictor*, sticking to the inner parts as far as the lips.

The upper lips *elevator*, rising from the jaws cavity, beneath the cheek bone, descends obliquely to it. Its *depressor's* brought into it from the lower jaws middle. The lower lips *elevator* from the cheek bones lower part, ends side-ways in it: its *depressor* from the

364 *V A D E M E C U M*: Or,
chin, is inserted to its middle. Its common
ones are the lateral, which draw them side-
wayes.

1. *Zigomaticus*, longish and thin, from *zi-
goma*, ends in the joining of each lip

2. *Bucco*, because it stirs the cheeks, while
it drives the meat this way and that way,
from the top of the gums, or bones there,
near the farthest grinders ends in each lip; it
may be call'd *spincter*, or *pilorus*.

The lower jaws muscles are each side six;
elevator from the temples whole cavity, car-
ried under *os zygoma*, and inserted in the jaws
end, by a nervous strong tendon; its adjutor
pterygoideus intern. from the hollow of *ptery-
goid's apophysis*, ends at the jaws corner;
Galen calls it *masseter internus*; *digastricus* and
latus depress it. *Digastricus* nervous in
the middle, and carnous at ends, springs
from *apophysis styloides*, and bent in the mid-
dle about *styloceratois*, is inserted in the chin
under the jaws bending: this rising from
sternon's upper part *clavicula*, and *acromium*,
cleaves firmly to the jaws *basis*, in folding the
neck and whole face, by which adhesion 'tis
said to draw the jaw down. *Pterygoideus*
extern. forces it forward; *Masseter*, turns it
here and there, and lifts it up; in its origine
'tis twice headed, one of which rises from *os*
zygoma, the other beneath it; each being
furnish'd

furnish'd with fibres, crossing one another, is inserted into the jaws corner, it may easily be divided into two.

Os hyois has muscles as well as ligaments, by which tis suspended, that it might be moved with *lingua* and *larynx*, so its muscles are common to both; it hath 5 on each side, *geniohyoideus*, from the inner chin inserted in its *basis*, elevates it; *mylohyoideus* underneath assists this, from the inner jaw where are the grinders, reaching the bones *basis*; *sternohyoideus*, from *sternon*'s top, stretcht to the weasand, inserted in the bones *basis*, draws it down; *stylocerathyoideus*, from the styloid *apophysis* is carried into its horns. *Genioglossus*, from the inner chin, ends in the tongues root and moves it forward; *basoglossus*, from *os hyoid*'s *basis*, carried to its root, moves it back; *styloglossus*, from *apophysis styloid*, to almost its middle draws it side-way.

Larynx is drawn upward, by *hyothyroides*, rising from *hyois*'s *basis*, is inserted in *thyroid*'s outer and middle part. *Bronchus*, from *sternon*'s inner part, and covering the wind-pipe, ascends *thyroid*'s *basis*, pulls it down. The gristles *thyroid* and *arytenois* are only moved, by muscles from *cricois*; *Grycothyroides anticus*, from *cricois*'s outer forepart, ends innerly in *thyroid*'s sides, and dilates it; *cricothyroides lateralis*, from *cricois*'s lateral part inserted

outerly in *thyrois*'s sides contracts it. *Thyro-arytænoidens*, from *cricois* and *thyrois*, being plac'd between them, opens *arytænois*; 'tis shut by one call'd *arytænoidens*, compassing it like the *spindler*, and with its *basis* binds *glottis*, in tuning the voice. *Epiglottis* hath no erecting and depressing muscles, as in brutes.

Pharynx hath 7 muscles, 3 fellows, and 1 *sine pari*. i. e. *Oesophagæus*. 1. *Sphenopharingæus*, from *sphenois*'s point, near *stylois*, bending downwards in the jaws sides, to draw *Pharynx* up. 2. *Cephalopharingæus*, from that part where the head's joined to the neck, descending, spreads to the *Pharynx*, and seems to make its very coat. 3. *Stylopharingæus*, from *styloid. apophysis*, is inserted *Pharinx* side-way to dilate it. *Oesophagæus* binds it; this from one side of *thyrois* compassing round *oesophagus*'s hinder part, is implanted in *thyrois* other side; or outwardly fixt to both sides, binds *oesophagus*'s beginning like the *spindler*.

Uvula hath two muscles on each side:

1. *Pterystaphylinus externus*, from the upper jaw, under the last grinder, ends in a thin tendon, passing through a chink, ingraven in *pterygois*'s upper seat, and there turned back as through a pulley, is inserted in *uvula*'s sides.

2. *Pterysta-*

2. *Perystaphylinus internus*, from the lower part of *pterygois's* inner wing, hath a peculiar moveable gristle for its origine, and ascending the length of *pterygois's* inner wing, ends at *uvula*. The heads common muscles move it, and the neck; the proper it alone; they are 14, on each side 7 in the hinder part, on the fore-part one; *Mastoidens*, from *sternon's* top, and *clavicula's* middle, is obliquely inserted in the *mastoid apophysis*, bends it 6 extend it 2 large: 1. *splenius*, from the lower spines of the 5 upper *vertebra's* of the back, and 4 of the neck is inserted in *occiput*.

Complexus assists this, from the said *vertebra's transverse apophyses*, ends in *occipite*. 4 small 1. *recti majores*, from the 2d spondyl's spine are inserted in *occiput*: under these 2 less streight, from the hinder part of the first spondyl end in *occipite*; *obliqu. major.* from the 2d *vertebra's* point, come to the firsts *transverse apophysis*; from the same place the less are carried *ad occiput*.

The Neck is bent by 1. *longus*, sited under *oesophagus*, from the body of the backs 3d *vertebra*, and ascending laterally annex to all the *vertebra's* bodies, ends in the fore-part of the first. *Scalenus* from *thorax's* first rib, is innerly inserted by oblique fibres, into all the necks *transverse apophyses*: 2 extend it, 1. *splanchnus*, from the chests 7 upper *vertebra's* root

of the neck, is inserted into the spine of the necks 2d *vertebra*. 2. *transversarius*, from *transverse apophyses* of the backs 6 upper *vertebra*, is planted outerly into all the necks *transverse processus*.

Levator proprius, from *transverse apophyses* of the upper neck's 2d, 3d, 4th *vertebra*, ends in *scapula*'s upper corner, and elevates it. *Trapezius ab occipite*, a top of 5 *spinae colli* and 8 or 9 of *thorax*'s upper, is inserted in *scapula*'s *basis*, and *spina*, as far as *acromium*; moves it diversly, according to the origine and direction of *fibres*. *Serratus min.* from 4 upper *Ribs*, ends in *coracoides*, draws it forward. *Rhomboides*, from 3 spines of the necks lower *vertebrae*, and *thorax*'s 3 upper spines, inserted into its extern *basis*, draws it back; though by its weight it return to its natural site, yet a part of *latissimus* running to the arm, by a loop cleaves to *scapula*'s lower corner, and is said to draw it downward.

The *Arms* muscles are 9, 1. *deltoides*, from *media clavícula*, *acromio*, *scapula*'s whole spine is carried to the arms middle. *Supraspinatus* thrust into the cavity above *scapula*'s spine, and convey'd under *acromion*, is inserted in the arms neck; these move it up. *Latissimus* from *os sacrum*'s spines, the loins 9 of the back, is inserted in part of the arm, a little below the head. *Rotundus major*, from *scapula*'s

scapula's whole lower Rib, ending almost in the arms middle assists this : these move it down. 5. *Pectoralis*, from the 7th, 6th, 5th true Ribs, *sternon*, and more than half *clavis*, is inserted in the arms middle, by a sharp tendon between *deltoides* and *biceps*. 6. *Coracoideus*, from *apophyses coracoid.* ends almost in the arms middle, these draw forward. 7. *Infraspinatus* rising in the middle of *rotund. min.* and *spina* ends in the arms neck, which it involves. 8. *Rotundus min.* from that hollow seen under *scapula's* lowest Rib, ends in the arms neck. 9. *Subscapularis*, possesses *scapula's* hollow and inner part, and is carried to the neck; these move back.

Biceps from a double origine, one from the extremity of *glenoid's* cavity, is convey'd through the arms cleft; the other from *coracoids apophysis*, which, after united, make one tendon, inserted in *radius's intern.* where it bunches. *Brachialis intern.* under *biceps*, from *brachii's* middle, to which it cleaves, ends between *radius* and *cubitus*, where they are fastned together: these sit in the arms inner part, bend the cubit; 'tis extended by 1. *longus*, from the *scapula's* lower Rib, nigh the neck, where it has a peculiar *sinus*, ends in *olecrano*. *Brevis* from the arms hinder cervix, ends in *olecrano* too; for the 3d, *Gal. l. i. administ. anat. c. ult.* recites a fleshy lump, con-

founded with 2 foregoing, and inserted into the same part. *Riolan* calls it *brachieus extern* because spread on the arms outside, 'tis plac'd under the 2 former; there *Galen* acquaints us, that one may accurately separate these 3 by the rectitude of their fibres. 4. *Antagonus*, sited in the bending of the hinder cubit, call'd *ancon*, answers to *popliteus*, rising from the arms lower and hinder part, sited between *radius* and *cubitus*, is inserted by a nervous tendon in cubits side, a thumbs length below *olecranon*; it cleaves sometimes so fast to *brachieus* externs fleshy end, that there appears no difference, and then 'tis judg'd to be a part of it extended thither.

Radius is bowed down by 1. *superior pronator rotundus*, from the inner part of the arms inner condyle, ends obliquely, with a membranous tendon, in *radius* nigh the middle. 2. *inferior pronator quadratus*, from cubits lowest part is transversely carried to *radius*'s lowest part, and is inserted in it, being all fleshy; it also knits *ulna* to *radius*, as if it were a ligament: 'tis drawn back by 2 extern. 1. *longus supinator*, from the arms point above *condylum externum*, stretcht along *radius*, is inserted in its lower *epiphysis*'s inside, fleshy. 2. *brevis*, from the outside of the inner knob, goes obliquely *ad medium radium*, and roul'd about, straitly comprehends it; 2 muscles bend, stretch, and

move the wrist side-way, the bender and extender of each side acting together.

1. *Cubitus intern.* from the inner part of the arms inner knob, stretch'd over *cubitus*, is drawn out aloft to the 4th wrist-bone of the first Rank.

2. *Radius intern.* of the same origine; stretch'd upon *radius*, is inserted in the *metacarpian* bone, sustaining *index*, these bend it: 2 outer muscles holding the same way extend it.

1. *Radius intern.* or *bicornis*, from the arms bony point above *condylum*, resting upon *radius*, emits a double *tendon*, one to *os carpi*, lying under *radius*, the other to *os metacarpii* sited under *index*. This hath its *tendons* included; and separated in peculiar sinews, gristly cases and sheaths; without the wrists annular ligament.

2. *Cubitus extern.* from the arms outer *apophyses* carried along *cubitus*, inserts its *tendon* in *metacarpium's* 4th bone under the little finger.

In the palm of the hand are two notable muscles call'd *palmar*, 1. *longus*, from the inside the arms knob spreads in *volar* to the first joint of the fingers; in its rise 'tis carious, after it's lessen'd to a small *tendon*, which going above the wrists annular ligament, nor included with the other *tendons*, is

disa

dilated into a nervous membrane, so firmly fixt to the skin, for subtile feeling, and firm holding, that it can hardly be sever'd from it.

Besides this, a piece of flesh 4 square of a thumbs breadth, redder than the *thenars*, is found upon the annular ligament, sometimes simple, sometimes cut in two, resembling 2 muscles, and stretch'd and infolded with the *palmar*, seems to rise from *thenar's* Root, and to be carried to the wrists 8th bone, plac'd out of order: its office is to make the hand hollow, and so with the thumbs muscles, and *hypothenar*, to form *Diogenes's* dish; it shall be call'd the short *palmar*.

The Interjunctures of the fingers are bent, extended and mov'd side-way: 2 muscles bend 4 fingers.

1. *Sublimis*, from the inner part of the arms knob, about *carpus* produces 4 tendons, ended at the fingers 2d article, and perforated, to give way to *profundus's* tendons.

2. *Profundus*, from *cubitus* and *radius's* upper parts a little below the joint, and *quadrupartite* reaches to the fingers 3d article through *sublimis's* tendon's holes. Out of *profundus's* tendon's, by *carpus*, arise 4 *lumbricals* firmly fixt, and carried to every fingers first joint, where they unite with the *interosseans*. The fingers extensors are common and proper;

proper ; those serve 4 fingers, as *extensor magnus*, or besides extension, cause other motions, as *lumbricals* and *interossei* join'd : these belong only to certain fingers, as *extensor indicis*, and *extensor auricularis*. *Magnus extensor*, from the arms outer knob by *carpus*, is cleft in 4 *tendons*, which end in the two lower joints of each finger.

The fingers are mov'd side-way, which they commonly call *adduci* and *abduci* ; adduction is a drawing towards the thumb, abduction from it ; this motion is perform'd by the *interossean* muscles, 3 extern, 3 intern, spread in the spaces of *metacarpium's* bones. They rise from their upper parts nigh *carpus*, and in the first joint, with a very small *tendon*, they creep side-way on the fingers 3 bones, to the nails Roots, where, afore and above, the *tendons* joining, they end ; therefore *interossei* acting together, strain the fingers stretch'd out, which figure they hold when we swim. Moreover, you shall observe two, as it were outer *interossean*, spread without on *metacarpium's* first and 4th bone ; one's *hypothenar* proper to the little finger, and may be cut in two ; it rises from *carpus's* 3d and 4th bone of the 2d order, and is inserted side-way into the space between the joints of the same finger, to draw it outward ; the other belongs to *index*, and lying beneath *antithe-*

nar, rises from the inner part of the thumbs first bone, and is inserted in *index*'s space between the joints, to draw it to the thumb; whence may be call'd *abductor indicis*. Besides the common extender's *tendon*, it hath a peculiar extensive muscle, which may be call'd *indicator*, which motion we use in shewing; it rises from *cubiti*'s middle extern part, inserted in the 2d articulation by a *tendon*; the other *tendon* closes with the greater *extensor*'s *tendon*; there's a proper *extensor* attributed to the little-finger, rising from *radius*'s upper part, lying between *cubitus* and *radius*; 'tis with a double *tendon*, planted on the little fingers out-side, but with another *tendon* is mixt with the greater *extensor*'s *tendon*. Mean while you shall note the *lumbrical* muscles, sometimes 3, sometimes 4, seldom 5; which though infolded with *profundus*'s *tendons*, and the constant opinion be they rise from them, yet *Riolan* thinks they rise from *carpus*'s nervous, *orbicular* ligament, that it might have a firm *origine*.

Pollex, the *thumb*, hath peculiar muscles; two long ones extend it, 1. from cubits upper outer side, ascends *radius*, and carried beyond *carpus*, is outerly inserted in the thumbs first and 2d joint, by a double or triple *tendon*; the other from cubits same part, but lower near *carpus*, ends in the thumbs 3d joint. A
muscle.

muscle growing from cubits inside, and innerly carried to its first and 2d joint, bends it. 2. move it side-way. 1. *Thenar*, from *carpus*'s inside, *sub pollice*, is inserted in the thumbs space between the joints, to draw it from the fingers. 2. *Antithenar*, from the external side of *metacarpium*'s first bone, sustaining the thumb, ends in its first *phalanx*, and draws it to *index*.

Thorax's proper muscles are such as specially belong to it; the common such as designed to a certain part, yet assist it as auxiliaries; as *scapula*'s upper ones: 5. dilate 'or elevate it. 3. fore, *subclavius*, *serratus maj. triangularis*, *sēu peētoralis internus*; one hinder, *serratus superior*, 5th *intercostalis externus*: *subclavius* from *clavicula*'s inside near *acromion* carnous, is inserted in the first Rib nigh *sternon*: *serratus maj.* from *scapula*'s inner basis, reaches to 6 or 7 Ribs, whereof the lower are true, 2 upper false. *Serratus posticus superior*, sited under *romboides*, from the spines of 3 of the necks lower *vertebra*, and the backs first spine, ends in 3 upper Ribs, sometime 4th. The xi extern *intercostals* hold the place of one muscle, carried obliquely forward from the upper Ribs lower side, to the lower Ribs upper side, to these dilating *thorax*, and *diaphragma*. *Triangularis* from *sternon*'s middle, inner part is inserted in the lower

lower Ribs gristles, to the 2d or 3d false Rib.
 3. Muscles contract *thorax*, 1. *Sacro-lumbus*, from *os sacrum*, and the loins spinous apophyses, ends in the upper Ribs, bestowing upon each near their Roots adouble tendon, or tendinous clasp, inward and outward; therefore serves to depress the Ribs, and erect the spine, when 'tis inclin'd forward, and bowed.
 2. The xi *intern intercostals*, fitting the spaces between the Ribs, are reckon'd but one, 'tis carried obliquely from the lower Rib to the upper, it has fibres contrary to the extern, cross-wise intersected.
 3. *Serratus posticus inferior*, from the spines of the backs 3d extreme *vertebræ*, and the loins first, ends in 3 or 4 lower Ribs. This is opposite to *serratus posticus superior*, and both by a broad membranous *aponeurosis*, so grow together, that they are as a band to tie and strengthen the spines hinder muscles: others add the *abdomen's* 3 muscles, because to violent expiration more muscles are required.

The *spine* or *loins* are bent by 2, on each side one: 1. *Quadratus*, which *Riolan* derives from the *transverse apophyses* of the backs 2 lower *vertebræ*, and last Rib, that it may, with the oblique descending, and strait ones, stir and move forward *ossæ ilium's* whole frame. *Abdomen's* muscles, serving for inspiration, help to bend the loins and whole spine; for depress-

depressing *thorax*, they bend *spina*; if lying upon your buttocks, you would lift your trunk, or leap up upon your feet without help of your hands: 4. muscles extend them 2 on each side, so infolded along *spina*, that we must either make as many pairs as *vertebrae*, or only one pair of muscles bestowing tendons to all the *vertebrae*; according to *Galen*, 1. *Semispinatus*, from a nervous origine from all *os sacrum*'s spines, ends in *transversus apophyses lumborum*, & *totius dorsi*. 2. *Sacer*, with a sharp carnous origine from *os sacrum*'s hinder parts, ends in Roots of the backs spiny *vertebrae*, they are mov'd side-way, when those of the other side, benders and extenders, act apart.

Of the muscles of the belly before.

Os ilium & *sacrum* join'd, are mov'd backward and forward in venereal congress for generation; the bellies right and oblique descending move it forward, *thorax* resting, and thighs mov'd, unless they follow *os ilium*'s motion. *Sacer* and *semispinatus* rising from the backs upper part, move it backward; which *Riolan* hath demonstrated by many Reasons and Experiments in his *Anthropographia*. *Cremafter* proper to each testicle, the obliques ascending sag end, nigh *os pubis*, whose flesh is redder, thinner, and as it were sever'd from the said muscles flesh, outerly infolding

folding *Peritoneum's* production, is carried with the *seminary* vessels, *ad testiculum* drawing up, and suspending it. The *common* is *dartos*, a continuation of *membrana carnosâ* suspending both *testes*; Women have *cremaster* shorter than Mens, cast upon *Peritoneum's* production.

The *Bladders Neck*, lest the urine should involuntarily flow out, is shut by a round fleshy muscle revolv'd upon *prostate*, made broad it expels it, and by wringing *prostate* in venereal congress, crushes out the seed: Now the *bladders neck* being carnous, performs the office of an inner *sphincter*, and exactly closes the *bladder*.

The *Yard* hath two on each side; *Erector* from *Ischium's* inner bunch, and stretcht to the *Yards* ligament, reaches laterally to the middle of its body. *Accelerator* rises not only from *anus's* *sphincter*, but also from *ischium's* inner bunch below the *Yards* ligament, and with its mate spread under *urethra*, is drawn to the *Yards* middle.

The *Clytoris* in Women represents a Mans *Yard*, therefore hath obtain'd muscles alike, though not serving the same office; of which in the Womb.

Anus is shut up by the round *sphincter* muscle, 'tis double, one cutaneous, the other broader, and more carnous, which adheres to
a trans-

carried a transverse ligament, plac'd between *os is-*
draw- *chium's* bunchings, and *coccyx* end. It hath
s dar- 4 *levators* 2 broad, rising from *os sacrum* and
suf- *ilium*, are inserted in the larger *sphincter*; 2
master narrow, one fore from the transverse liga-
pro- ment, the hinder from *coccyx*, and end in't.
ould These 4 lift *anus* bunching out, and almost
ound falling in expelling of hard excrements; the
made circular shut it, lest the excrements should
state flow involuntarily, therefore at our will we
Now direct this excretion.

The *Thigh* is extended when we stand,
(being perpendicularly put under *ischium*) by
3 muscles, which make *nates*; therefore cal-
led by Authors *gloutii*: the greatest and out-
most from *coccyx*, *os sacrum's* spines, more
than half *ilium's* Rib, is inserted 4 fingers be-
low *trochanter magnus*, where a certain emi-
nence of the bone appears. The 2d and mid-
dle from *os ilium's* outer part, is inserted in
the great and outer *trochanter*. The 3d and
inmost from *os ilium's* outer, but more lower
from the surface, is implanted in *trochanter*
magnus's top: 'tis bent by 1. *Psoas*, spread
over the bodies of the *lumbar vertebrae*, in the
bellies hollow, from the *transverse apophyses*
of the back's 2 lower *vertebrae*, and carried
upon *ilium's* inner surface, is inserted in the
small *trochanter*. 2. *Iliacus* from *os ilium's*
inner cavity, and by its tendon join'd with
the

the *lumbar*, ends between the great and small *trochanter*. 3. *Pectineus*, from *os pubis*'s upper part, is inserted below the foreside of the thighs neck: 'tis drawn inward, by *triceps* which has 3 origines, and as many distinct insertions; 1 head rises from *Os Pubis*'s upper part; the other from the same *Os*'s middle; the 3d from its lower part, and are inserted in *femur*'s hinder line, dispos'd by course. This muscles action is strong and valid, drawing the thighs inward, when we climb Trees and Main-masts, and Ride. Small ones draw it outward, because this motion is not very necessary. *Quadragemini*, are 4 small ones by course placed on the hinder part of the thighs articulation; the first and upper longer than the rest, and Pear fashion'd; by others is called *iliacus externus*, rises from *os sacrum*'s lower and outer part; the 2d rises from *os ischium*'s bunch; the 3d contiguous to this, rises from the same part, and these 3 are inserted in great *trochanter*'s cavity; these 3 included in great *trochanter*'s cavity, serve to thrust down, or lengthen *femur*, when 'tis stretch'd a little beyond its natural length, which you may observe in one upon his back and body extended. They perform this action in the manner as *Pterygoideus internus* between the two jaws drives the lower forward. *Quartus quadratus*, broader and fleshier than

than the other, distant from the 3d 2 fingers breadth, from the inner part of *ischium's* bunch, is fixt to the great *trochanter's* outer part: two *obturators* obliquely wheel it about; *internus*, from the inner circumference of a hole in *Os Pubis*, and carried through that *sinus* between *ischium's* knob and socket, by a *breechleift tendon*, is carried to great *trochanter's* cavity; its *tendon* folded and inclosed in the 2d and 3d *quadrigeminus*, resembling a Purse, directs the outer wheeling. *Externus* from the outer circumference of the hole in *Pube*, and roul'd through *femur's* neck, as through a Pulley, is carried to great *trochanter's* cavity, under *quartus quadrageminus*, it governs the inner wheeling.

The Leg is bent by 4 hinder muscles:

1. *Seminervosus*, from *ischium's* knob, ends in the Legs hinder and inner part.

2. *Semimembranosus*, from the same knob, with a nervous and membranous beginning, but broader *tendon* is drawn to the Legs inner and hinder part.

3. *Biceps*, from the same knob, and carried by *femur's* outer part, about its middle assumes a carnosus lump, which *Riolan* saw separated to its head, for a 2d muscle is inserted in *tibia's* outward part by a *tendon*.

4. Vulgarly *posticus gracilis*, from the line which shews the closing of *os ischium* and *Pubis*,

Pubis, and descending *femur*'s inner part, is inserted in the Legs inner part. *Riolan* refers *Popliteus* to the benders, lurking in the ham's hollow, above *soleus*'s head; from *femur*'s extern knob is obliquely inserted in the Legs hinder and upper part, which it straitly embraces: 6 muscles extend it. 1. *membranofus*, from *os ilium*'s upper spine is carried to *tibia*'s, or rather *femur*'s fore-part, and girts in the Legs muscles, like a membranous swath, except *Sutorius*. This rising from *ilium*'s upper spine and fore-rib, and sliding obliquely by *femur*'s inside, ends in *tibiam internam*, which it is said to bring to, and place over the other, after the manner of Tailors, when they fit cross-leg'd. *Rectus gracilis*, from *os ilium*'s lower spine, carried right along *femur*, ends in the Legs fore-part beneath *Epigonatis*; the two *vasti* border on *rectus gracilis* on each side: one of which, *externus*, from great *trochanter*'s Root, ends in the Leg a little below the *Patella* outerly; the other *internus*, from little *trochanter*'s Root, falls in the Legs inside a little below *Patella*. *Crureus*, plac'd under the *vasti*, from *femur*'s fore-bone between the *trochanters*, and cleaving to the whole thigh, produces its *tendon* over *Epigonatis ad tibiam anticam*. These *rectus*, *gracilis*, *vasti duo*, *crureus* united about the knee form a broad, strong *tendon* wherein *Patella* is infolded.

As

As the hand is divided in three parts so the foot into *tarsus*, *metatarsus*, and *phalanx*, three rows of toes; and as the *carpus* is moved, *metacarpus* unmov'd, so *tarsus* is mov'd, *metatarsus* unstir'd; therefore *tarsus* is bent, when mov'd forward, extended when backward; where note the bowings of the members in the whole foot are contrary; in the hand alike, for taking hold; in the foot contrary, for firm standing, and performing different actions; for *femur*'s flexion is forward, *tibia*'s backward; the foot's flexion forward, the toes backward.

Two muscles bow *Pes*, or *Tarsus*: *Tibians Anticus*, from *tibia*'s upper *Epiphysis*, near *fibula*, cleaving to the whole Leg, about the middle of the bone degenerates to a *tendon*, which under the foot's annular ligament is cleft in 2 tendons, one of which is inserted in the first nameless bone, the other reaches to *metatarsus*'s bone over the great toe. *Peroneus Anticus* is join'd to *Peroneus Posticus* in its rise; though both *tendons* are drawn through the outer ankles cleft, which in their end and insertion are separated. *Anticus* from *Perone*'s middle and extern part, led through the extern ankles cleft, is inserted forward in *os metatarsis*, which sustains the little toe. The foot's extended by hinder muscles; the first and outmost are the twins, because

because alike in bulk, strength, action, call'd also *gastrocnimii*; one internal, plac'd in *tibia*'s inner side, the other its outside; the inner twin, rises from *femur*'s inner *condyle*, the outer from its outer; disjoin'd in the beginning, at length grow into one belly, which by a strong *tendon* is carried to the heels hinder part.

Plantaris lurking between *gemelli* and *soleus*, from *femur*'s outer *condyle*, carnosus upward, presently by a small longish *tendon* under the heel by the inner ankle bone is diffused to the sole of the foot. It performs the same office in the foot as the hand, that the foot might answer to the hand, and whilst the foot is hollow'd, the skin might be firmly glutinated by the under tendons. *Soleus*, a broad and thick muscle, takes its origine from *tibia*'s upper part, or from *tibia* and *perone*'s upper and hinder joining, and by a tendon mixt with *gemelli*, is insert'd in the heels hinder part: of *gemelli* and *soleus* join'd in the lower part, is made the most thick and strong common tendon, which *Hippocrates* call'd *chorda magna*, whose hurts, bruises, and cuts, bring death. Two hinder muscles extend the foot: *Tibialis Posticus*, from *tibia*'s upper part, and fixt to all of it, though the inner ankle bones cleft produces 2 tendons, one ending in *scaphoid*, the other carried to the
first

first nameless bone. *Peroneus posticus*, from *Perone*'s upper and hinder part, carried by a cleff of the outer ancle with *anticus peroneus*, to *os metatarsi*, sustaining the great toe under the foots sole, transmits its broad, hard and grisly tendon under the tendinous head of that fleshy mass which produces its intern interosseans. *Peroneus anticus & posticus*, as they are distinct in their origine, so in insertion, though drawn through the outer ancles pully; but the tendon of *Peroneus*'s other bender is outerly inserted in *os metatarsi*, sustaining the little toe. The tendon of the other extender and hinder *Peronean*, is carried further innerly under *Pedieus*. These 2 tendons included in nerve grisly sheaths are separated.

The *Toes* have their proper muscles to bend, extend, and side motion, whose tendons are comprehended in a round and transverse ligament, scattered below the ancles, as in the wrist, *longus*, or *cnimodaetilius*, from *tibia*'s fore-inner side, where it joins *fibula*, hid under *tibiae*'s *antic.* descends strait along *fibula*, and passing beyond the *ring ligament*. ends in the 3 joinings of the 4 toes, that it may at once extend the 3 joints of the said 4 toes. *Brevis tensor*, or *Pedieus*, from the heel and outer part of neighbouring *astragalus*, and spread under the upper, is, with its tendon

386 *V A D E M E C U M*: Or,
 inserted in all the joints or knobs, these extend them ; the tendons of these both long and short, cross one another above *metatarsus*. They are bent by *brevis* and *longus*, which answer *profund.* & *sublim.* of the hand: *longus flexor*, or *perodactyleus*, from *Perone's* hinder upper part, and carried along the inner angle through the heels peculiar cavity, is cleft in 4 tendons, which are drawn through the slits of the short toes bender's tendon as in the hand, is inserted in 4 toes 3d joint. *Brevis flexor*, or *pedeus intern.* from the heels inner and lower part, and parted in 4, ends in the toes 2d joint ; its tendons are perforated for *longus flexor's* tendon to pass through, they are drawn side-way by 8 *musculi interossei*, 4 inner, 4 outer, which are not dispos'd as in the hand ; the outer from the *metatarsi's* bones spaces, the inner plac'd in the foot's hollow, are spread over the bones, and are drawn from one nervous sharp beginning, nigh the heel, fixt innerly, and cleft in 4 tendons, and end in the 2d joint, whereto *lumbricales* cleave; therefore the outer *interosseans* fill *metatarsus's* bones spaces. *Lumbricales* rise not from the long toe benders tendons, as in the hand, but from a fleshy mass, which lies hid under the short toe bender, and this rises from the heel.

The great toe bender near the toes long
 bender

bender fleshy, from *fibula*'s upper part, where it joins *tibia*, and marching under the inner ancle, and foots sole, is inserted in the great toes first bone ; and before it comes to the 2d, a little *sesamoidean* intervenes , and the tendon for security is intercepted by 2 greater *sesamoidean* officles ; sometime under the foots sole 'tis tore in 2 tendons, one assists the great toe, the other the 2d little toe ; then the long toe bender is divided in 3 only. *Extensor pollicis*, from *tibia*'s outside , where it gapes from *fibula* , and creeping along the foots surface, is inserted in the whole great toes upper part, the other ends in *metatarsus*'s bone spread under the great toe. The great and little toe have 2 notable muscles outerly sited, which abduce them ; so that one outerly stretch'd to *os metatarsi* , which is plac'd under the great toe, is nam'd its *abductor* ; the other outerly lying upon *metatarsus*'s 5th bone, is call'd the little toes *abductor*, they answer the hands *thenar* and *hypothenar*. Beside the great toe, in the foots sole, has another transverse muscle, like *antithenar*, which from *os metatarsi*'s ligament, which lies under the least or next toe, marching obliquely over the other bones, with a strong tendon ends below in the great toes first joint ; this is opposite to *abductor*, to draw back the great toe.

Now of the veins, arteries, and nerves of the limbs.

The veins of the Arm begin *ab axillis*, in the Leg *ab inguine*. *Axillaris*, nigh *axilla*, produces *cephalica*, it runs without an artery along *radius*, then emits *thoracica*, which, expanded over the chests outer parts, meets small twigs of *azygos*; after 'tis call'd *Basilica*, and at the cubit's cleft in 2 branches; one creeps along the inner cubits length, the outer under the skin descends to the hand; the inner branch is call'd *mediana*, and receives a branch of *cephalica*, below the cubits bending; where 'tis call'd either cephalic, or basilic; *cephalica* stretch'd upon *radius*, nigh *carpus*, turns to *metacarpus*, to water the hollow of the hand. Between the ring and little finger in *metacarpio's* plac'd *salvatella*, between the thumb and fore-finger *pollex*. *Mediana's* wholly extern, and subcutaneously runs *ad palmam*. *Basilica* creeps along cubits inner and outer parts, by a two-headed branch; the veins of the limbs communicate with the Arteries.

For the Arteries, *ramus superclavius*, going *ad axillas*, is call'd *axillaris*, accompanying *vena basilic*, where there's no cephalic artery: nigh *axilla* it produces *thoracica*, and in its progress bestows twigs to nigh parts, and stretched to cubits bending, is cleft in 2 branches, carried to the inner hand the other branch stretch'd upon *radius's* inside, is felt
in

in the wrist; the other running strait to *ulna*, with its fellow is spread upon the hand, the thumb and little fingers length, bestowing branches on every finger.

For the *Nerves* out of holes of 4 lower neck *vertebrae*, and the backs 2 first, 5 or 6 *Nerves* spring, which, drown'd in *scaleus*, are brought under *clavicula* to *axilla*; where they are folded like a Cardinals hats strings. After the 4 upper, under *deltoides*, are sprinkled on the inner part accompanying *basilica*, and the arms artery, creeping between *biceps* and *brachius externus*. The 5th and 6th *Nerve*, bent back under *scapula's rotundus major*, are disseminated on the heads hinder muscles; then the 4 describ'd which carried by the arm and cubit, are dispers'd to the cubit and hand. 1s. *Nervus* below the shoulders head, is drown'd in *coracoideus*, and drawn under *biceps* inside, and lurking under its tendon, joins *vena cephalic*. where it grows small; and is spread under it, below cubits bending. 2s. *Nervus* undivided, and thicker, descends to cubits bending, where 'tis under *arteria* and *ven. basil.* but 4 fingers beneath the bending, alwayes stretch'd over *basil.* it runs undivided to *carpus*, where the vein is higher; in *carpo* 'tis cleft in 10 small twigs, giving to each finger 2 scions creeping side-way; below cubits bending 3 fingers breadth, 'tis

S 3

cover'd

cover'd by *carpus* and *cubitus* bending muscles, which rise from the arms inner bunch. The 3d is led undivided to *ancona*, where carried by a cleft between *olecranium* and *condylum intern. brachii*, all cubits length, and spread over *cubiteus intern.* 'tis carried to *carpus* toward the little finger; therefore by leaning on the elbow, the whole arm's benumbed; near the hand cleft in 4 branches, 'tis spread over the hands outside. The 4th thickest infolded with veins and arteries, and sunk in *brachieus extern.* is led from the arms forepart to its hinder, and, descending by it to *radius* all along, join'd to *cephalica*, and lies hid in *carpus*.

For the lower limbs vessels, *cruralis vena* produces in *inguine* a famous branch, 1. *Saphena*, which descends the ham along *satorius*; below in *sura* making *poplitea*, which was open'd anciently; there it transmits a branch, returning upward above the ham to the *crural* veins; or from these *crural*, *saphena* receives that twig; then cleft in two, it slides to both outer angles, but the greater part runs to the inner, where it forms the true *saphena*.

When the *crural* hath produc'd *saphena*, 'tis presently divided in 4 branches, 2 outer, lateral and shorter are scatter'd on the thighs upper muscles both inner, i. *biceps*, and
outer,

outer, i. *vasti* and *crureus*. The 3d branch penetrating the inner parts, is call'd *ischiadicus*; the 4th *muscularis*. These branches being produc'd, *crurals* trunk split in 2, descends to the knee, environ'd with the *crural* artery cleft in 2; but the one goes high, watering the outer parts, the other's deeper; both send twigs to the neighbor parts, and when they come to the ham drawn between *soleus* and *gemelli*, descend to both ancles. But the outer ancle is principally bedew'd by the deeper *crural*; yet so, as in the ancles compass occur 2 notable veins. That which rests upon the inner ancle, is a branch of *saphena*; that which runs below it spread over *tarsus*, is *crural's* issue. The *crural* arteries distribution is unlike the veins; for it produces no *saphena*: For a little below *inguen*, it transmits 2 between *triceps* muscle, which reach as far as *gloutii*, then it emits 2 to *femur's* fore-parts, then undivided descends to the ham, where 'tis cut in 2 branches; one creeps along *tibia's* outer part above *peroneus*; the other thrust into *soleus*, and sliding to *pterna*, is plac'd in the foot's sole, and the other is scatter'd on the foot's outside.

Femur's fore-parts Nerves are 2, distinct in their rise, but presently joining, make one cord, carry'd undivided *ad inguen*; where 'tis commonly parted in 5 twigs, inclos'd in a

membrane; which disperst up and down, are spread on *femur's* fore-parts muscles, even to *patella*: their rise is in the loins 3 lower *vertebræ*, nor does it appear till you tear *psoas*, in which they lurk. A great and very thick Nerve in its rise, creeps along *femur's* hinder part, made of 3, and oftner 4 portions, which are bred out of 3 or 4 *os sacrum's* upper holes, and carried through *os ischium's* hole, between the same *os ilium's* spine, by *femur's* inner and hinder muscles undivided, sometime double and solitary without the company of vein and artery, as is usual in other Nerves of the body, is carried to the ham; where cleft in 2, sometimes 4, it bestows small twigs according to its bulk on the nigh parts; the other branch descends by *sura* to the heel, bestowing little Nerves by the by, and drawn through the inner ancles cleft, is distributed on the foots sole into as many branches as fingers. Another is carried to the foots forepart stretcht to *perone*, and slides to the outer ancle, and when 'tis come, there 'tis scatter'd on the foots upper part, as was said of the other.

This Nerve is not mixt with the other as in the arm, but is carried behind *femur*, because the arms joint is farther from the necks *vertebræ*, than *femur's* is from the loins *vertebræ* and *os sacrum*. Gal. c. 8. l. 16. de usu part.

About

About the great Nerves beginning is another join'd, leaping from *os sacrum's* third hole, and carried above its spine; cut into branches, is diffus'd on *gloutii*, and *tibia's* benders, even to the ham.

Of the B O N E S.

Hippocrates and *Galen* teach to begin the Study of Anatomy with the Doctrine of the Bones, therefore the Student ought first to be instructed in the knowledge of the Bones, before he come to Anatomical Inspection of the whole Body; else he will be but half-sighted, in noting the original and insertion of the muscles, and cleaving of other parts to bony conceptacles.

* A Bone is a similar part, most cold and dry, form'd of the thick and fat substance of the seed by heat, for the form and settlement of the whole body.

The Bones are knit together *per articulum* and *symphism*: *Articulus* is twofold *Diarthrosis*, & *synarthrosis*, that hath evident motion, this obscure, or none; therefore the difference of each is equal, but this is call'd *enarthrosis diarthrosis*; that *enarthrosis synarthrosis*: *enarthrosis* is when a large and long head goes into an ample cavity, which seeing 'tis common to *diarthrosis* and *synarthrosis*, see

an example of both. *Enarthrosis diarthrosis*, is evident in *ischiums* joint; the other is obscure in the ancles articulation with *scapulis*. *Arthrodia* is perform'd, when a depress'd and plain head, is receiv'd by a light and superficial cavity: an example of *arthrodia diarthrodes*, is the joining *humerus* with *scapula*; of *arthrodia synarthrodes*, is *carpi cum metacarpo*. *Ginglymos* is a mutual ingress of bones; as in *hinges of doors*, &c. *ginglymus diarthrod.* is *humeri cum cubito*; *ginglymos synarthrodes tali cum calce*. *Ginglymos* is 1. *simple*, made of two bones join'd by one, and a simple articulation in the same part, as in the juncture of elbow and arm: 2. *compound*, consists of a double one, perform'd in the same ends, or in distant places, of 2 or 3 bones; which made by a double articulation, is finish'd in the same ends: 'tis seen in the necks *vertebræ*: a compound by a double article, in distant ends of 2 bones, is seen in *cubitus* and *radius*, of 3 bones in the loins and backs *vertebræ*. Beside, *synarthrosis* contains under it 1. *Harmonia*, is a conjunction of bones by simple contact without mutual ingress of ends; distinguish'd by a right, oblique, or winding line. 2. *Sutura* is a joining of bones, like thrusting the teeth of 2 saws or combs within one another. 3. *Gomphosis*, is when one bone is fix'd firm in another,

Symphysis,

Symphysis, opposite to articulation, is an immoveable conjunction of bones; as if those were united which Nature brings forth divided, and in process of time grow together: therefore some are united without any discernable *medium*, others with one interpos'd, whence arise 3. simple differences of *symphysis*, *syssarcosis*, *syneurosis*, *synchondrosis*; only one mixt i. by a nerve and cartilage, which *Galen* calls *neurochondrosis*.

Many bones make the *scull*, their partings are call'd *sutures*; some, 1. true and proper, which distinguish the bones of the *scull* from the upper jaws, which are like the conjunctions of two saws or combs intertexted, 1. *coronalis*, going to both temples. 2. *Lambdoid* opposite plac'd in *occipite*. 3. *Sagittal*, from *lambdoid* s top the *scull*s length, and sometimes to the nose top joins both. 2. False join the temples bones to the heads top: common 1. *Frontal*. from the eyes outer corner passes by *orbis* middle, even to *supercilium*, keeping the same way by the other *orbit*, ends in the lesser corner, parts *os frontale* from the lower jaw. 3. *Sphenoid*, circumscribes *os sphenois*, beginning at the middle part of the heads crown, ends in the jaws outer teeth. 3. *Ethmoid* compasses *os ethmois*, is liker *harmonia* than *futura*.

The bones are 1. *os frontis*, distinguish'd by
the

396 *VADE MECUM*: Or,

the first common, and coronal suture, it includes 2 cavities deriv'd to the nostrils; 2d, 3d, are call'd *sinciput*, separated above by the sagittal, below by the scaly false suture; before by *coronal*, behind by *lambdois*. The temples are under these, scaly upward, downward hard and rough, call'd *petrosa*. In this part, note 4 *apophyses mastoid*, *styloid*, *zygomatic*, 4th in the skulls inner *basis*, and may be call'd *auricular*, in this are contain'd the ears 3 cavities: 1. *Porus auditorius*, outer. 2. *Concha*, comprehends the inner air, and 3 ossicles, *malleolus*, *incus*, *stapes*, and a hole passing to *mastoid*'s hole. This holes end opposite to the drum, hath 2 holes boar'd in't; the greater call'd the oval window, the ingress to the third cavity. 1. *Labyrinthus*, from its various turnings, returning to the same cross-way; the other narrower, is the entrance to the fourth cavity. 1. *Cochlea*, from its rough and writh'd figure: the 6th bone's call'd *lambdoides*, and separated by the *lambdoid* suture: the 7th *sphenois*, its inner table swells with 3 *apophyses*, call'd *clinoides*, one hinder 2 fore reaching to the optic nerves rise, the cavity between these is call'd *sella sphenoides*; its outer table hath 4 *apophyses*, 2 hollow like a ship, call'd *naviculares*, *pterygoides* by *Galen*; the other go to the temples, *temporals*: the 8th *ethmoides*, by *Galen* *spongides*, consists of seven

Seven several portions : 1. the table board like a sieve, from which rises an *apophysis* within the scull, the 2d portion, call'd *crista galli*; without the nostrils from the same table depends the bony plate severing the nostrils, call'd *septum narium*, and is the 3d portion: to this stick 2 spongy bones, which make 4th and 5th part; the 6th and 7th portion is a thin, plain, smooth like, a thumbs breadth; it makes each *orbits* inner side nigh the great *canthus*; below it covers 3, sometimes 4 cells, reaching from the great *canthus*, to the inmost *orbit*.

The upper jaw hath 5 bones on each side, one without a fellow sustains the palats midle, i. *Galen* calls *melon*. it may be call'd *zigomaticum*, from making *zigoma's* greatest part, the eyes less corner, and great part of *orbit*: now *zigoma's* a bony semicircle made of 2 *apophyses* join'd in the middle by the oblique suture; one proceeds from *petrosa*, the other's part of the cheek bone. 2. *Os unguis*, *ossiculum lacrymale*, *os agylopi*s rests in *majori cantho*. 3. *Os maximum*, makes the teeths middle part, compleats the lower *orbit*, and the noses inner part 4th forms the nose; so 4 bones form the nose, 2 proper mention'd last, 2 common, part of the *maxillary*; late Authors add a bone between *sphenois* and *palatum*, not unknown to *Hippocrates*, call'd *Vomer*, reaching the inner nostrils,

nostrils, sustains the noses bridge, to which 'tis join'd by *suture*, or *harmony*.

The *orbitary* bones are not proper, except the *ungular*, but portions of the skull and upper jaw. 1. *Frontal*, makes its vault. 2. Part of *sphenois* sited in *orbits* deep outer side *ad canthum min.* 3. *zygomaticum* makes *canthus min.* and the *orbits* pavement. 4. *maxillare.* 5. *lacrymale.* 6. *Os ethmois* scaly table, makes *orbits* other side *ad maj. canthum*; these bones are discern'd within the *orbit*, with their proper and common *futures*.

The lower jaw in *adults* is one bone, in which its *basis* and its ends are noted; *basis* middle part, hollow within, bunching without, is call'd the *chin*; its ends are call'd corners, each horny end sends out 2 *apophyses*, one sharp, call'd *corone*, receives *muscul. temporalis* tendon; the other *condylodis*, it may be call'd *articularia*, for serving to the jaws conjunction. Below these is a noted inner hole, by which vessels are scatter'd to the teeth; part of which goes by the chin, by a narrower and outer hole, dispers'd to the lips muscles.

The teeth *basis* that part without the gums, their root's within, hollow to receive a small vein, artery and nerve; their root is various in number and figure; that of the cutters simple and streit, distinguished by a cleft
for

for firmer sticking ; so is the dog teeth ; in the upper grinders 'tis triple and crooked, because they hang down ; in the lower double, and sometimes triple : their number in full age is distributed in 3 orders, as to site and bigness ; the first 4 are call'd *cutters* ; on each side one join'd next, *dog teeth* ; the rest 8, or 10, *grinders* ; they are plac'd in by *gomphosis*.

The trunk, the *skeleton's* 2d part, comprehends the spine, and bones adhering, 'tis made of *spina*, and *thorax* ; *spina* or *rachis* is a bony pipe, the spinal marrows conceptacle, reaches from *caput* to *coccyx* ; it consists of many bones, for security and action of bowing, &c. call'd *vertebræ* ; in each note two parts : 1. inner thick, round, call'd *corpus* ; the other outer, swelling with diverse *apophyses*, wants a name ; of the *apophyses* are 3 differences : 1. *streit*, *oblique*, *transverse*, the hinder's sharp, call'd *spina*, the lateral and transverse is double, the oblique fourfold, by which the *vertebræ* are join'd by a compound *gynglymum*, whereto 3 bones are requir'd ; of the oblique *apophyses* two bend upward, two downward ; so all the *vertebræ* swell with 7 *apophyses*. The whole *rachis* is parted in 4, neck, back, loins, or *sacrum* ; the neck hath 7 *vertebræ*, back 12. loins 5. or *sacrum* is one, or 3. in adults.

In the necks *vertebræ*, all the transverse *apophyses* are perforated, to give way to the ascending cervical veins and arteries, hollow in the ends to convey the soft nerve; the sharp are horned, for the rise and insertion of muscles; but the upper 2 have another structure for the heads motion; for the first wants a spine, and a thick round body; the 2d emits an *odontoid apophysis*; all the necks *vertebræ* are strictly and intricately join'd, lest they should slip asunder in the necks vehement motion.

The backs *vertebræ* are alike, their *apophyses* solid, and continued without any hole: the 12th or 11th *vertebras* articulation differs from the rest, these cohere by *ginglymus*, they by *arthrodia*; so the motion of the whole spine, i. flexion, extension, obliquation is perform'd upon that *vertebra*.

The loins 5 *verteb.apophyses* differ from the backs, for the hinder, or *spinæ*, descend not as the backs, are streit and broad; the *transverse* are longer, standing in stead of Ribs.

Os *sacrum* is under the loins, and seems one simple bone, yet boil'd long in oil, it divides in 5 or 6 parts, to its ends join'd a three, seldom four cleft, or castilaginous bone, call'd *coccyx*, we the crupper bone.

Thorax cum spinæ make the *skeleton's* trunk; *thorax* is made of 4 kind of bones; *sternon* before;

before ; the Ribs o' the side ; *clavicula* o' top ; the back behind ; *sternon* in *adults* is a continued bone, distinct by 3 or 4 *transverse* lines, the footsteps of ancient divisions ; more conspicuous inner, than outerly ; on this bones end depends the xyphoid gristle, representing a shield in brutes. xii Ribs on each side ; 7 upper call'd *true*, because join'd to *sternon* ; the 5 lower *false*, because not join'd it ; but to a gristle to give way to tumors of the liver and spleen, and yield to *diaphragma's* motions. The clavicles are on each side one, in figure like an Italian *S*. join'd between *acromium* and *sternon*, they keep *scapula* in its site , lest it fall upon the breast.

In *omoplata* many parts come to be noted, very requisite to the rise and insertion of the muscles ; part of it stretch'd along the back, is call'd *basis*, whose ends are call'd angles, one upper, the other lower. *Basis* sides are call'd Ribs, of which the shorter, thinner's call'd the upper ; the longer & thicker, the lower ; its whole *trapezian* breadth's call'd *mensa*, whose outer part is gibbous, inner hollow, to receive a muscle. A famous *process* or *apophysis* ascending upwards from its *basis*, is call'd *spina*, whose broad end is called *acromion*, (which, according to *Hippocrates* and *Galen*, is a distinct bone, gristly in children, in *adults* bony, which after 20, and sooner, is chang'd

chang'd to an *apophysis*, glued to *spina*. *Fossula* stretcht on each side *spina*, is call'd *inter-scapulium*; one upper, the other lower, but *spina*'s middle bunch call'd *pterygium* vulgarly: *scapula*'s other great end, under *acromion*, and opposite to *basis*, is call'd *cervix*; in it note *apophysis coracoides*, made for security and firmness of the shoulders joint: the necks cavity's *glenoides*.

Manus depends upon *scapula*, divided into 3 parts, *humerus*, *cubitus*, and *extrema manus*; in *humero* note 2 ends, for insertion of muscles; the upper, call'd *Caput*, which a membranous ligament from *glenoidis* mouths cavity compasses, besides the *aponeuroses* of 4 muscles wherewith 'tis involv'd; a little below *Caput*, the orbicular narrowness is call'd the neck. In the head is engraven a longish chink, by which *biceps* nervous head is drawn; in the arms other ends the *trochlea*, about which the cubit's turn'd; about *trochlea* are 2 cavities, the inner ampler than the outer; in these are receiv'd the cubits *apophyses*, call'd *coronæ*; 2 o' th' arms *apophyses* are join'd to *trochlea*, call'd *condyli*, one lower, inner, the other higher and outer.

Cubitus is made of 2 bones, one higher, shorter, call'd *radius*; the other lower, greater, under the former, keeps the name of the whole, and is called *cubitus*, by some *ulna*: 2 bones

bones were necessary here, because of the double and contrary motions, which could not be perform'd by one bone join'd by *ginglymos*; for that suffers only flexion and extension, not inversion, which *radius* join'd by *arthrodia* performs. *Radius*'s obliquation cannot be perfectly discern'd, unless in a new carcass, all the muscles remov'd: for then, with great admiration, you'll see *radius* turned upward and downward upon cubits being firm; and also mov'd with *cubitus* when bent and extended. In *cubitus* ends is something worth note; for in the upper end is the *sgmoid* cavity, which embraces the arms *trochlea*; about this 2 coronal *apophyses*, the lower's call'd *olecranon*; in the lower part *cubitus* emits the *styloid apophyse*; these bones are join'd together in their ends, by that *ginglymus* made of 2 bones, going in one another in distant places.

Extrema manus is divided in three parts, *carpus*, *metacarpus*, and *phalanx digitorum*, because they seem to stand in battel aray.

Carpus is made of 8 bones distributed in 2 orders, join'd among themselves by *sympbysis*, and, its *species*, *harmonia*; therefore *carpus*'s bones are mov'd among themselves obscurely, or not at all; the first order with the lower cubit makes *arthrodia diarthrosis*; the same order's knit with the 2d order of *carpus*'s bones

bones by *arthrodia*; which 2d order is join'd with *metacarpus* by *arthrodia synarthrosis*, therefore this joints motion is either none at all, or insensible, but the first order with the 2d is mov'd obscurely.

Metacarpus is made of 5 bones, if with *Riolan* we add the thumbs first bone, which others reject; because obliquely added to *metacarpus*, and manifestly moves, against the nature of *metacarpus*'s other bones, which with *carpus* make *arthrodia*, with the fingers *enarthrosis*; yet *metacarpus*'s 4th bone sustaining the Ring finger, moves manifestly. From each bone of *metacarpus* is each finger directly reach'd out, *pollex* excepted: the fingers consist of 3 bones join'd by *ginglymos*, so are only bent and extended; their oblique and lateral motion depends on the first bones, *enarthrosis cum metacarpio*.

The greatest bones of the body which join'd with *os sacrum*, sustain and erect the trunk, are call'd *ossa ilium*; in adults continued, in children tripartite, and retain the ancient names, though the footsteps of divisions are obliterated: the bones broader part making almost its whole breadth, and reaching *ad medium acetabulum*, is call'd *os ilium*; the upper half of the other part is call'd *os pubis*, the lower *os ischium*: of these 3 parts the great *basin* is form'd.

In

In these bones some particulars are to be noted ; Anatomists call *os ilium's* external face *Dorsum*, the upper, inner, hollow, *venter*; the end *costa*, inner, and outer brims, call'd lips, or brows ; so as one's inner, the other outer ; its bunchy end join'd to *os sacrum* the *binder spine* ; its other end towards *acetabulum*, the *fore upper spine* ; under this is another, call'd the *fore lower spine*. In *os pubis's* a *spine* near *symphysis*, by its joining a top with its other fellow : in *os ischiums* a *spine* and bunch, the tubercle's call'd *condylus*.

The *feet*, as the *hands*, are divided in 3 parts, the thigh, leg, and foot ; the thigh bone is the greatest of the whole body : now its ends, in the upper is *caput*, round, under which is a slender part call'd *cervix* ; from which are 2 *apophyses* produc'd, to which *musculi rotatores* are fixt, therefore call'd *trochanters* ; the fore's call'd *minor trochanter*, the upper lateral, *major trochanter*. The thighs other end is parted by 2 *condyli*, the middle cavity being left, which admits the legs middle and bunchy *apophyses*, and *vicissim femur's condyls* are received by the legs cavities, by a loose *ginglymos* : this articulations fore-part is call'd *genu*, the hinder *poples*. *Patella*, a small bone spred over, and cleaving to no bone by article, fixes and strengthens this articulation.

The

The *leg* is compos'd of 2 bones, the greater and inner is call'd *tibia*, the lesser and outer *fibula*: *tibia* is articulated to *femur* by *ginglymos*; *fibula* sticks to *tibia*, not touching *femur*. *Sura* and *tibia*'s lowest and buncchy parts are call'd *malleoli*, *tibia* makes the inner, *fibula* the outer ancle.

Pes is divided in *tarsus*, *metatarsus*, and *toes*; *tarsus*'s made of 7 bones: the first join'd to *tibia*'s call'd *astragalus*, or *talus*; that under this *pterna*, 3d join'd to *astragalus*, *scaphoides*, 4th to which is join'd the heels lower and fore-part *cuboides*; the other 3 have no names, or *calcoidea*. *Metatarsus* is form'd of 5 bones, answering *manus metacarpio*. *Digiti* consist of 3 bones, except the greater, which have only 2; certain officles fill and strengthen the interjunctures of *manus* and *pedis digiti*, chiefly in adults; of uncertain number, call'd *Sesamoidea*. In the great toes 2d article, are 2 officles worth note, and big enough; alwayes found in all carcasses, and are to be added in fabricating.

Thus have I given thee a short Anatomical Treatise, where I have, as nigh as possible, kept to the doctrine of the Ancients, after the manner of my ever honoured Master, Dr. *Riolan*, whose *Enchiridion Anatomicum* I have *Enchiridioniz'd*, if I may so say, for thee.

If

If thou ask why so? I answer, first, I know not a better the world yet hath produc'd for young Students; and himself is stil'd, by our English *Hippocrates* Dr. *Harvy*, *Coryphæus Anatomicorum*; and is said by Dr. *Primrose*, to have perfected Anatomy; lastly, in his last Edition of his *Anthropographia*, he disowns all his other Anatomical Treatises, except his *Enchiridion*. Secondly, I did it to free so great a Person from a world of Errors, committed by a Translator and Printer in English

E R R A T A.

PAGE 120. line 10 for *with*, read *without*,
scammony. p. 137. l. 21. for *elephants*,
∴ *elks*, *hoof*. p. 142. l. 21. for *dryed*, r. *un-*
dryed. p. 207. r. *faint*. p. 245. l. 12.
r. *begin*, *your*. p. 266. l. 22. r. *pudendagra*.
p. 324. l. 6. r. *the other motion of muscles*.
p. 340. l. 8. to *colli*, add *are*.

Courteous Reader, what thou find'st either literal, or more material, be pleased to correct and pardon: For *humanum est errare*.

F I N I S.